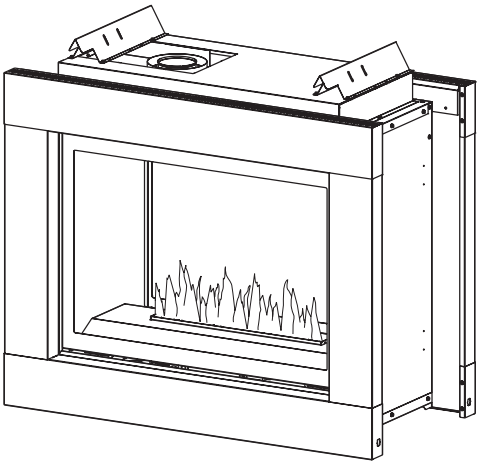
INSTALLATION INSTRUCTIONS AND OWNER'S MANUAL

EMPIRE COMFORT SYSTEMS

The Direct Vent Zero Clearance Gas Fireplace Heater



DIRECT VENT GAS FIREPLACE HEATER

MODEL SERIES

DLCX36SP93(N,P)-1

GAS-FIRED

c UL us **LISTED**

UL FILE NO. MH30033

Installer: Leave this manual with the appliance.
Consumer: Retain this manual for future reference.

WARNING: If the information in these instructions are not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

— **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**

— **WHAT TO DO IF YOU SMELL GAS**
- **Do not try to light any appliance.**
- **Do not touch any electrical switch; do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

— **Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

WARNING: If not installed, operated and maintained in accordance with the manufacturer's instructions, this product could expose you to substances in fuel or from fuel combustion which can cause death or serious illness.

⚠ WARNING

HOT GLASS WILL CAUSE BURNS.
DO NOT TOUCH GLASS UNTIL COOLED.
NEVER ALLOW CHILDREN TO TOUCH GLASS.

NATIONAL FIREPLACE INSTITUTE® NFI CERTIFIED www.nficertified.org

We suggest that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

This appliance may be installed in an aftermarket, permanently located, manufactured home (USA only) or mobile home, where not prohibited by state or local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.

TABLE OF CONTENTS

Section	Page
Carton Contents	3
Hardware Package	3
Important Safety Information	4
Safety Information for Users of LP Gas	5
Requirements for Massachusetts	6
Introduction	7
Specifications	8
Fireplace Dimensions	9
Clearances	10
Locating Fireplace	11
Planning Installation	12
Gas Supply	13
Fireplace Installation Instructions	14-15
Installation	16
Vent Systems	17
Venting Fireplace - Top	18-20
DVVK-4FV Direct Vent Termination Kit	21-27
Examples - Top Vent Run	28
Termination Clearances	29
Vent Clearances	30
Vent System Identification	31
Framing and Finishing	32-33
Horizontal Termination	34
DVVK-4F Flex Vent Instructions	35
Vertical Termination	36-37
Operating Instructions/Flame Appearance	38
RF Operating Instructions	39
RF Maintenance Instructions	40
RF Wiring Diagram	41
RF Standing Pilot Lighting Instructions	42
Maintenance and Service	43
Parts List	44
Parts View	45
Accent Lamp	46
Optional Decorative Glass Placement	47
Surround Options	48
Accessories	48
Master Parts Distributor List	49
How To Order Repair Parts	49
Appliance Service History	50-51

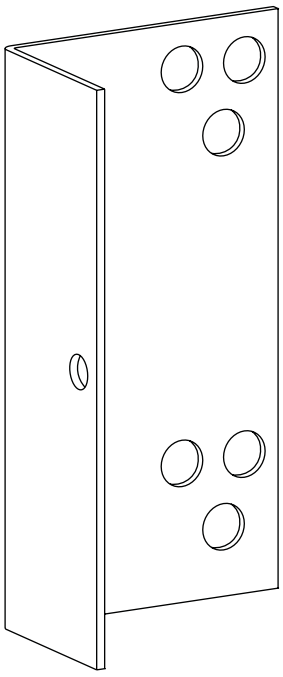
CARTON CONTENTS

Fireplace Assembly

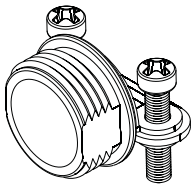
Installation Package

- Installation Instructions
- Serial Number Tag
- Receptacle, 3-Prong
- Warranty Card
- Cover, Junction Box
- **Hardware Package (See Figure Below)**
  - Romex Connector (1)
  - #10 x 1/2" Hex Head Screw (16)
  - Nailing Flange (8)

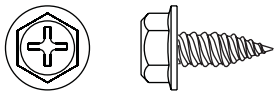
HARDWARE PACKAGE



NAILING FLANGE



ROMEX CONNECTOR



#10 X ½” HEX HEAD SCREW

Note: Hardware shown to scale where possible.

IMPORTANT SAFETY INFORMATION

Before enclosing the vent pipe assembly, operate the appliance to ensure it is venting properly.

DO NOT OPERATE THIS APPLIANCE WITHOUT ALL GLASS DOOR PANELS INSTALLED

- **If this appliance is installed directly on carpeting, tile or other combustible material other than wood flooring the appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance.**

  The base referred to above does not mean the fireproof base as used on wood stoves. The protection is for rugs that are extremely thick and light colored tile.
- **Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition.**
- **Young children should be carefully supervised when they are in the same room as the appliance.**
- **Clothing or other flammable material should not be placed on or near the appliance.**
- **Adequate accessibility clearances for servicing and proper operation.**
- **This appliance must not share or be connected to a flue serving a separate solid-fuel burning appliance.**
- **Keep the area around your appliance clear of combustible materials, gasoline and other flammable vapor and liquids.**
- **Under no circumstances should any solid fuels (wood, coal, paper or cardboard etc.) be used in this appliance.**
- **The flow of combustion and ventilation air must not be obstructed in any way.**

- **Due to high temperatures the appliance should be located out of traffic and away from furniture and draperies.**
- **The glass front or any part removed for servicing the appliance must be replaced prior to operating the appliance. Work should be done by a qualified service person.**
- **Keep burner and control compartment clean.**
- **Vent cap is hot while fireplace is in operation.**
- **Installation and repair should be done by a QUALIFIED SERVICE PERSON. The appliance should be inspected before use and at least annually by a qualified service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding materials, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean.**
- **DO NOT put anything around the fireplace that will obstruct the flow of ventilation air.**
- **Clearance in accordance with local installation codes and the requirements of the gas supplier.**
- **DO keep the appliance area clear and free from combustible material, gasoline and other flammable vapors and liquids.**
- **DO examine venting system periodically and replace damaged parts.**
- **DO make a periodic visual check of pilot and burners. Clean and replace damaged parts.**
- **CAUTION: The glass used in your fireplace is tempered glass. If the glass is cracked or damaged in any way, it should be replaced only with a complete glass frame assembly from Empire. See parts list on page 44 and parts view on page 45 for ordering.**
- **DO NOT use this fireplace if any part has been under water. Immediately call a qualified service technician to inspect the heater and to replace any part of the control system and any gas control which has been under water.**
- **Any safety screen or guard removed for servicing an appliance must be replaced prior to operating the appliance.**

SAFETY INFORMATION FOR USERS OF LP GAS

Propane (LP-Gas) is a flammable gas which can cause fires and explosions. In its natural state, propane is odorless and colorless. You may not know all the following safety precautions which can protect both you and your family from an accident. Read them carefully now, then review them point by point with the members of your household. Someday when there may not be a minute to lose, everyone's safety will depend on knowing exactly what to do. If, after reading the following information, you feel you still need more information, please contact your gas supplier.

LP-GAS WARNING ODOR

If a gas leak happens, you should be able to smell the gas because of the odorant put in the LP-Gas. That's your signal to go into immediate action!

- Do not operate electric switches, light matches, use your phone. Do not do anything that could ignite the gas.
- Get everyone out of the building, vehicle, trailer, or area. Do that IMMEDIATELY.
- Close all gas tank or cylinder supply valves.
- LP-Gas is heavier than air and may settle in low areas such as basements. When you have reason to suspect a gas leak, keep out of basements and other low areas. Stay out until firefighters declare them to be safe.
- Use your neighbor's phone and call a trained LP-Gas service person and the fire department. Even though you may not continue to smell gas, do not turn on the gas again. Do not re-enter the building, vehicle, trailer, or area.
- **Finally**, let the service man and firefighters check for escaped gas. Have them air out the area before you return. Properly trained LP-Gas service people should repair the leak, then check and relight the gas appliance for you.

NO ODOR DETECTED - ODOR FADE

Some people cannot smell well. Some people cannot smell the odor of the chemical put into the gas. You must find out if you can smell the odorant in propane. Smoking can decrease your ability to smell. Being around an odor for a time can affect your sensitivity or ability to detect that odor. Sometimes other odors in the area mask the gas odor. People may not smell the gas odor or their minds are on something else. Thinking about smelling a gas odor can make it easier to smell.

The odorant in LP-Gas is colorless, and it can fade under some circumstances. For example, if there is an underground leak, the movement of the gas through soil can filter the odorant. Odorants in LP-Gas also are subject to oxidation. This fading can occur if there is rust inside the storage tank or in iron gas pipes.

The odorant in escaped gas can adsorb or absorb onto or into walls, masonry and other materials and fabrics in a room. That will take some of the odorant out of the gas, reducing its odor intensity.

LP-Gas may stratify in a closed area, and the odor intensity could vary at different levels. Since it is heavier than air, there may be more odor at lower levels. Always be sensitive to the slightest gas odor. If you detect any odor, treat it as a serious leak. Immediately go into action as instructed earlier.

SOME POINTS TO REMEMBER

- **Learn to recognize the odor of LP-Gas.** Your local LP-Gas Dealer can give you a "Scratch and Sniff" pamphlet. Use it to find out what the propane odor smells like. If you suspect that your LP-Gas has a weak or abnormal odor, call your LP-Gas Dealer.
- If you are not qualified, do not light pilot lights, perform service, or make adjustments to appliances on the LP-Gas system. If you are qualified, consciously think about the odor of LP-Gas prior to and while lighting pilot lights or performing service or making adjustments.
- Sometimes a basement or a closed-up house has a musty smell that can cover up the LP-Gas odor. Do not try to light pilot lights, perform service, or make adjustments in an area where the conditions are such that you may not detect the odor if there has been a leak of LP-Gas.
- Odor fade, due to oxidation by rust or adsorption on walls of new cylinders and tanks, is possible. Therefore, people should be particularly alert and careful when new tanks or cylinders are placed in service. Odor fade can occur in new tanks, or reinstalled old tanks, if they are filled and allowed to set too long before refilling. Cylinders and tanks which have been out of service for a time may develop internal rust which will cause odor fade. If such conditions are suspected to exist, a periodic sniff test of the gas is advisable. **If you have any question about the gas odor, call your LP-Gas dealer. A periodic sniff test of the LP-Gas is a good safety measure under any condition.**
- If, at any time, you do not smell the LP-Gas odorant and you think you should, assume you have a leak. Then take the same immediate action recommended above for the occasion when you do detect the odorized LP-Gas.
- If you experience a complete "gas out," (the container is under no vapor pressure), turn the tank valve off immediately. If the container valve is left on, the container may draw in some air through openings such as pilot light orifices. If this occurs, some new internal rusting could occur. If the valve is left open, then treat the container as a new tank. Always be sure your container is under vapor pressure by turning it off at the container before it goes completely empty or having it refilled before it is completely empty.

REQUIREMENTS FOR MASSACHUSETTS

For all side wall horizontally vented gas fueled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied:

1. INSTALLATION OF CARBON MONOXIDE DETECTORS. At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gasfitter shall observe that a hard wired carbon monoxide detector with an alarm and battery back-up is installed on the floor level where the gas equipment is to be installed. In addition, the installing plumber or gasfitter shall observe that a battery operated or hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontal vented gas fueled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard wired carbon monoxide detectors
   a. In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.
   b. In the event that the requirements of this subdivision can not be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.

2. APPROVED CARBON MONOXIDE DETECTORS. Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and be ANSI/UL 2034 listed and IAS certified.

3. SIGNAGE. A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) inch in size, **"GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS".**

4. INSPECTION. The state or local gas inspector of the side wall horizontally vented gas fueled equipment shall not approve the installation unless, upon inspection, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CMR 5.08(2)(a) 1 through 4.
   (b) EXEMPTIONS: The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:
      1. The equipment listed in Chapter 10 entitled "Equipment Not Required To Be Vented" in the most current edition of NFPA 54 as adopted by the Board; and
      2. Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.
   (d) MANUFACTURER REQUIREMENTS - GAS EQUIPMENT VENTING SYSTEM NOT PROVIDED. When the manufacturer of a Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for venting the flue gases, but identifies "special venting systems", the following requirements shall be satisfied by the manufacturer:
      1. The referenced "special venting system" instructions shall be included with the appliance or equipment installation instructions; and
      2. The "special venting systems" shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instruction.
   (e) A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting design instructions shall remain with the appliance or equipment at the completion of the installation.

INTRODUCTION

Instructions to Installer

1. Installer must leave instruction manual with owner after installation.
2. Installer must have owner fill out and mail warranty card supplied with the fireplace.
3. Installer should show owner how to start and operate the fireplace.

This direct vent gas fireplace heater is designed to operate with all combustion air being siphoned from the outside of the building and all exhaust gases expelled to the outside of the building. The information contained in this manual pertains to all models and gas control systems unless otherwise noted.

Warning: This unit is not for use with solid fuels.

Appliance Certification

This fireplace is design certified in accordance with American National Standard/CSA Standard ANSI Z.21-88/CSA 2.33 and by Underwriters Laboratories as a Direct Vent Gas Fireplace Heater and shall be installed according to these instructions.

Consult your local building code agency, prior to installation, to ensure compliance with local codes-including permits and inspections.

The fireplace, when installed, must be electrically grounded in accordance with local codes or, in absence of local codes, with the *National Electric Code ANSI/NFPA 70* or Canadian Electric code, CSA C22.1, if an external electrical source is utilized.

These models may be installed in a bedroom or bed-sitting room in the U.S.A. and Canada.

Qualified Installing Agency

Installation and replacement of gas piping, gas utilization equipment or accessories and repair and servicing of equipment shall be performed only by a qualified agency. The term “qualified agency” means any individual, firm, corporation or company which either in person or through a representative is engaged in and is responsible for (a) the installation or replacement of gas piping or (b) the connection, installation, repair or servicing of equipment, who is experienced in such work, familiar with all precautions required and has complied with all the requirements of the authority having jurisdiction.

State of Massachusetts: The installation must be made by a licensed plumber or gas fitter in the Commonwealth of Massachusetts.

The installation must conform with local codes or, in the absence of local codes, with the *National Fuel Gas Code ANSI Z223.1/NFPA 54* Natural Gas and Propane Installation Code, or CSA B149.1 in Canada. *Available from the American National Standards Institute, Inc. 11 West 42nd St., New York, N.Y. 10036.*

Warning: ANY CHANGE TO THIS FIREPLACE OR ITS CONTROLS CAN BE DANGEROUS.
Improper installation or use of the fireplace can cause serious injury or death from fire, burns, explosions, or carbon monoxide poisoning.

Any alteration of the original design, installed other than as shown in these instructions or use with a type of gas not shown on the rating plate is the responsibility of the person and company making the change.

Important

All correspondence should refer to complete Model Number, Serial Number and type of gas.

High Altitude

When installing this unit at an elevation above 2000 feet (in the United States) it may be necessary to decrease the input rating by changing the existing burner orifice to a smaller size. Generally, input should be reduced 4 percent for each 1000 feet above sea level. However, if the heating value of the gas has been reduced, this general rule may not apply. Check with local gas utility for proper orifice size identification.

Canadian High Altitude

Altitude: 0-4500 feet (0-1370 m)

When installing this unit at an elevation above 4500 feet (in Canada), check with local authorities.

Consult your local gas utility for assistance in determining the proper orifice for location.

Preparation

This direct vent gas fireplace and its components are tested and safe when installed in accordance with this Installation Manual. Report to your dealer any parts damaged in shipment, specifically check glass condition. Do not install unit with damaged, incomplete, or substitute parts. Read all instructions before starting installation and follow these instructions carefully during installation to insure maximum benefit and safety. Failure to follow them will void your warranty and may present a fire hazard.

The warranty will be voided by, and the warranter disclaims any responsibility for the following actions:

- Installation of any damaged fireplace or vent system component.
- Modification of the fireplace or direct vent system.
- Installation other than as instructed by Empire Comfort Systems, Inc.
- Improper positioning of the logs, glass door or decorative rock.
- Installation and/or use of any component part not manufactured or approved by manufacturer.

Note: For shipping purposes, the junction box is installed on the inside of the outer fireplace wrap. It is secured with a screw on the side of the fireplace. Once removed from the side of the fireplace, wiring to the junction box and receptacle can be performed. Re-install the junction box assembly to the side of the fireplace so that the receptacle faces inward. See Page 12, Figure 7.

Caution: Wiring must be performed by a qualified electrician.

SPECIFICATIONS

DLCX36SP93N Nat Models	
Input Btu/hr Maximum	30,000
Btu/hr Minimum	17,500
KWH (Maximum)	8.8
(Minimum)	5.2
Orifice	2.75 mm (P305)
Air Shutter Opening	1/4"
DLCX36SP93P LP Models	
Input Btu/hr Maximum	30,000
Btu/hr Minimum	20,000
KWH (Maximum)	8.8
(Minimum)	5.9
Orifice	1.65 mm (P250)
Air Shutter Opening	1/2"
DLCX36SP93(N,P) Nat and LP Models	
Height without standoff	34 3/4" (883 mm)
Width, Face	39"
Depth	18"
Gas Inlet Shutoff Valve (pipe)	1/2" NPT

Note: Air shutter settings are factory minimum settings. Some venting configurations may require minor air shutter adjustments for optimum performance.

Venting Options	Description
DVVK-4TSP (DVVK-4TS)	Top Vent Kit (Horz.) - 5" to 7" wall thickness
DVVK-4TP (DVVK-4T)	Top Vent Kit (Horz.) - 8" to 11" wall thickness
DVVK-4VP (DVVK-4V)	Vertical Vent Kit
DVVK-4F	Horizontal Flex Vent Kit (4' Flex)
DVVK-4RE	Horizontal Round Termination wall thickness - 5" to 13 3/4"
DV822	Vinyl Siding Kit for DVVK-4RE
DVVK-4FV	Vertical Flex Vent Kit (6' Flex / 4' Rigid = 10' Total)
DVEK-10	10' Vent Extension Kit
DVEK-25	25' Vent Extension Kit

Surround Options	Description
DF36M4BL	Black 4-Sided Surround Kit
DF36M4BLSS	Black 4-Sided Surround Kit with Brushed Stainless Steel Top and Bottom Panels

Note: One surround required for each side of DLCX36SP Fireplace.

FIREPLACE DIMENSIONS

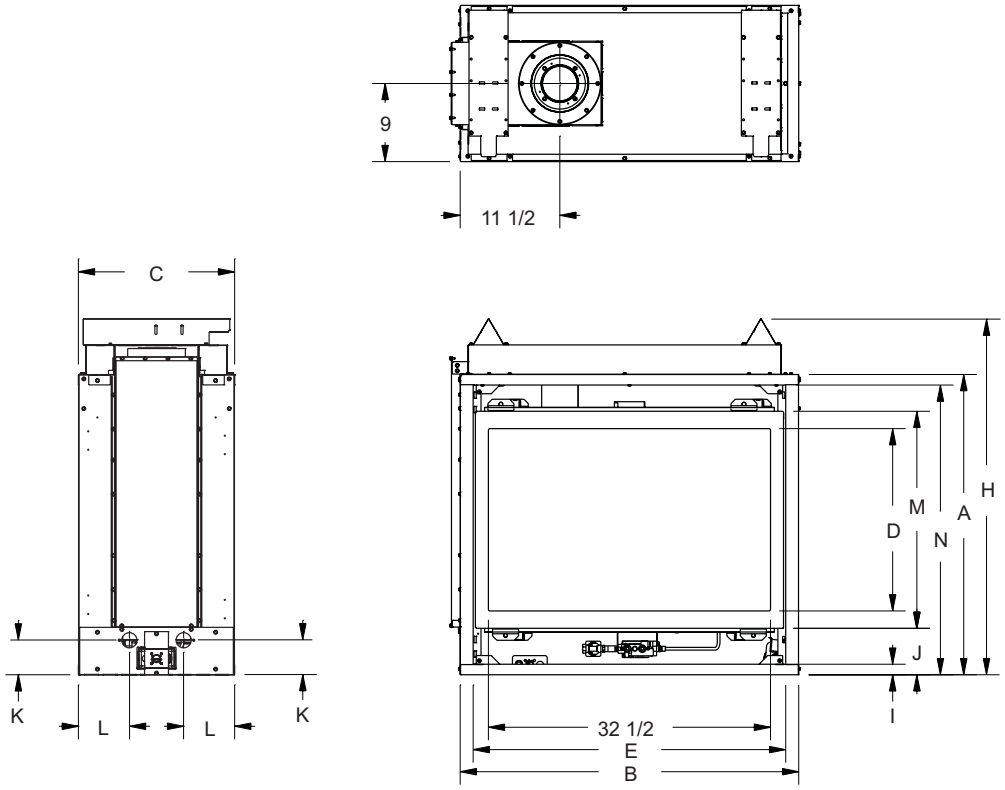


Figure **1**

DIMENSION	DLCX36SP
A	34 3/4”
B	39"
C	18”
D	21"
E	36”
F	N/A
G	N/A
H	41 1/8”
I	1 1/4”
J	5 3/8"
K	2 1/2”
L	6”
M	25"
N	33 1/2”
MAX WEIGHT (LB)	167

When planning a fireplace installation, it is necessary to determine the following:

- The vent system configuration to be used.
- Gas supply piping.
- Electrical supply requirements for blower and valve system.
- Properly framed opening size required for installation of the fireplace.

CLEARANCES

Clearance to Combustibles	
Air Drop (End)	1/2" (12.7 mm)
Side	1/2" (12.7 mm)
Floor	0" (0 mm)
Top Stand-off	0" (0 mm)
Top Framing Edge	6 1/4" (159 mm)

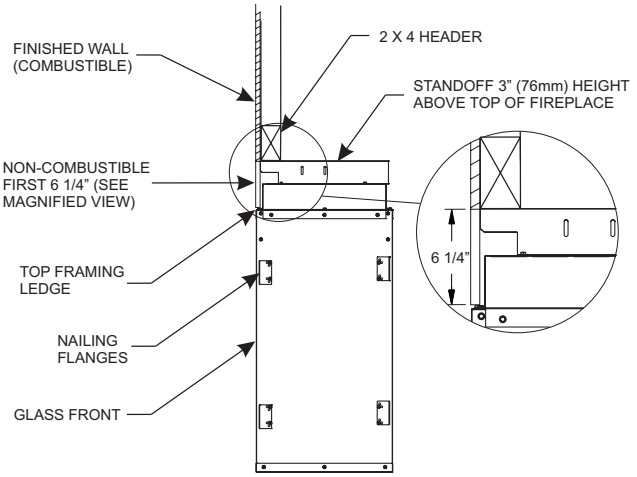


Figure **2**

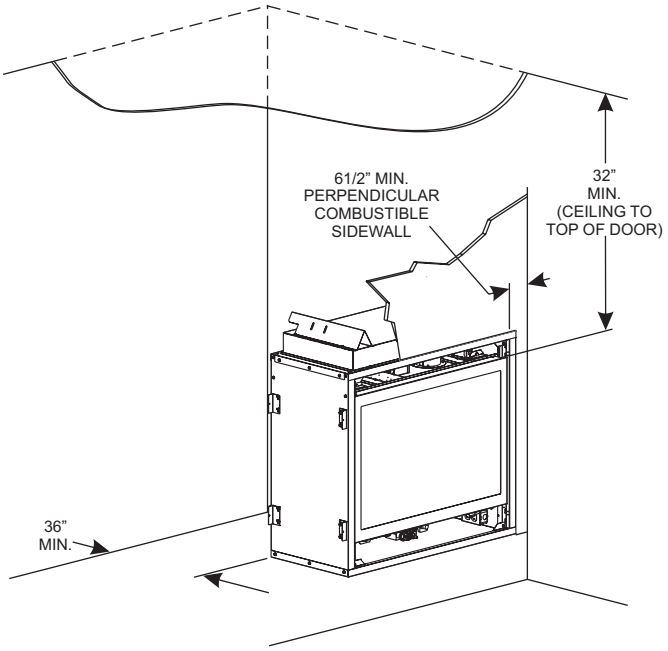


Figure **4a - See Through Fireplace Clearances**

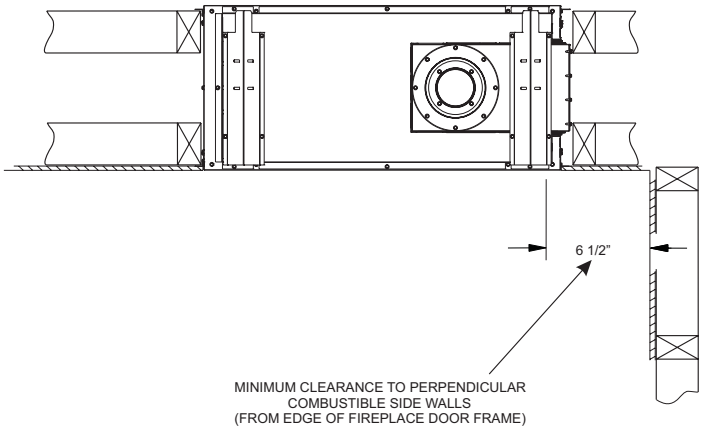


Figure **3**

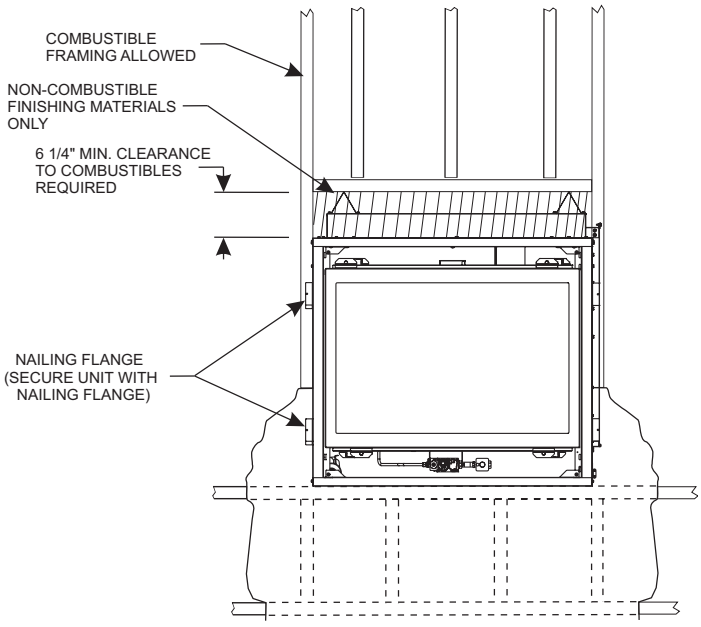


Figure **4b - Fireplace Clearances**

Combustible Material

No greeting cards, stockings or ornamentation of any type should be placed on or attached to the fireplace. The flow of heat can ignite combustibles.

LOCATING FIREPLACE

Note:** Island (C) and Room Divider (D) installation is possible as long as the horizontal portion of the vent system (H) does not exceed 20 feet with a minimum vertical run of 8 feet. See details in Venting Section.

*When you install your Direct Vent Fireplace, a minimum of 6 1/2 inches clearance must be maintained from the perpendicular wall and the front opening of the appliance.

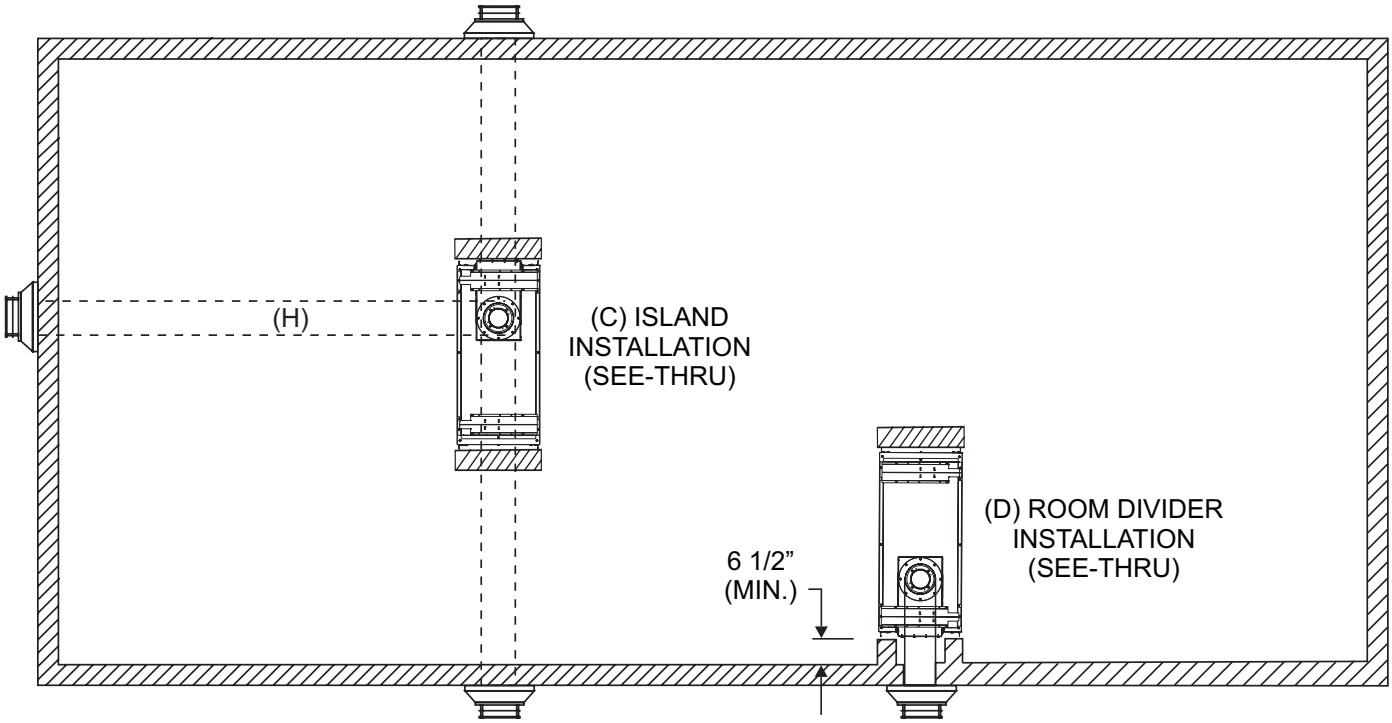


Figure 5

PLANNING INSTALLATION

In planning the installation for the fireplace, determine where the unit is to be installed and whether optional accessories are desired. Gas supply piping should also be planned at this time. A gascock shutoff must be installed in this line.

The fireplace can be mounted on any of these surfaces:

1. A flat hard combustible or non-combustible surface.
2. A raised platform of combustible or non-combustible material.
3. Four (4) corners of the fireplace so contact is made on all four perimeter edges on the bottom of the unit.
   (Example: Four (4) concrete masonry blocks.)

If the fireplace is installed directly on carpeting, tile or other combustible material other than wood flooring, install the fireplace on a metal or wood panel extending the full width and depth of the unit.

At this point, you should have decided what components to include in your installation, and where the fireplace is to be located. If this has not been done, stop and consult your dealer for assistance with this planning.

GAS SUPPLY

The gas pipeline can be brought in through the bottom or air inlet duct side of the appliance. Consult the current National Fuel Gas Code, ANSI Z223.1 CAN/CGA-B149 (.1 or .2) installation code.

Recommended Gas Pipe Diameter				
Pipe Length	**Schedule 40 Pipe Inside Diameter**		**Tubing, Type L Outside Diameter**	
	Nat.	L.P.	Nat.	L.P.
0-10ft 0-3m	1/2" 12.7mm	3/8" 9.5mm	1/2" 12.7mm	3/8" 9.5mm
11-40ft 4-12m	1/2" 12.7mm	1/2" 12.7mm	5/8" 15.9mm	1/2" 12.7mm
41-100ft 13-30m	1/2" 12.7mm	1/2" 12.7mm	3/4" 19mm	1/2" 12.7mm
101-150ft 31-46m	3/4" 19mm	1/2" 12.7mm	7/8" 22.2mm	3/4" 1.9 mm

Note: Never use plastic pipe. Check to confirm whether your local codes allow copper tubing or galvanized.
Note: Since some municipalities have additional local codes, it is always best to consult your local authority and installation code.

The use of the following gas connectors is recommended:

— ANS Z21.24 Appliance Connectors of Corrugated Metal Tubing and Fittings.

— ANS Z21.45 Assembled Flexible Appliance Connectors of Other Than All-Metal Construction

The above connectors may be used if acceptable by the authority having jurisdiction. The state of Massachusetts requires that a flexible appliance connector cannot exceed three feet in length.

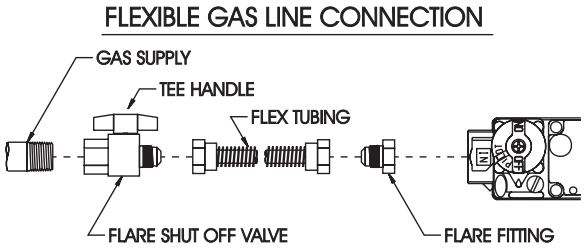


Figure **6**

	Gas Supply Pressure (inches w.c.)		
	Minimum	Normal	Maximum
Natural Gas	5.3"	7.0"	14.0"
LP (Propane)	11.7"	12.0"	14.0"
	Manifold Pressure (inches w.c.)		
	Normal (HI)		
Natural Gas	3.5"		
LP (Propane)	10.5"		

Installing a New Main Gas Cock

Each appliance should have its own manual gas cock.

A manual main gas cock should be located in the vicinity of the unit. Where none exists, or where its size or location is not adequate, contact your local authorized installer for installation or relocation.

Compounds used on threaded joints of gas piping shall be resistant to the action of liquefied petroleum gases. The gas lines must be checked for leaks by the installer. This should be done with a soap solution watching for bubbles on all exposed connections, and if unexposed, a pressure test should be made.

Never use an exposed flame to check for leaks. Appliance must be disconnected from piping at inlet of control valve and pipe capped or plugged for pressure test. Never pressure test with appliance connected; control valve will sustain damage!

NOTE: The gas controls are equipped with captured screw type pressure test points, therefore it is not necessary to provide a 1/8" test point up stream of the control.

When using copper or flex connector use only approved fittings.

The appliance and it's individual shut off valve must be disconnected from supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5kPa).

The appliance must be isolated from the gas supply piping system by closing its individual manual shut off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5kPa).

Attention! If one of the procedures results in pressures in excess of 1/2 psig (14" w.c.) (3.5 kPa) on the fireplace gas valve, it will result in a hazardous condition.

Checking Manifold Pressures

Both Propane and Natural gas valves have a built-in pressure regulator in the gas valve. Natural gas models will have a manifold pressure of approximately 3.5" w.c. (.871kPa) at the valve outlet with the inlet pressure to the valve from a minimum of 5.3" w.c. (1.120kPa) for the purpose of input adjustment to a maximum of 14.0" w.c. (3.484kPa). Propane gas models will have a manifold pressure approximately 10.5" w.c. (2.49kPa) at the valve outlet with the inlet pressure to the valve from a minimum of 11.7" w.c. (2.68kPa) for the purpose of input adjustment to a maximum of 14.0" w.c. (3.484kPa).

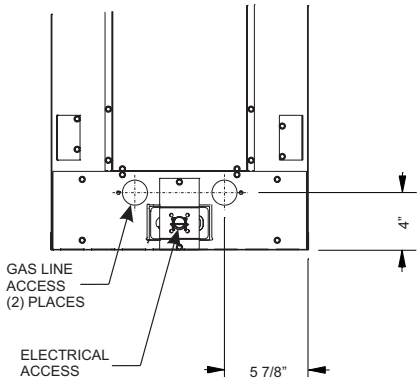


Figure **7**

FIREPLACE INSTALLATION INSTRUCTIONS

Fireplace Framing

Framing can be built before or after the fireplace is set in place. Framing should be constructed to accommodate wall covering and fireplace facing material. The framing header should be installed on edge to provide required airspace clearance to venting. The framing headers may rest on the top standoff spacers. Refer to Figure **8** for framing dimensions.

To begin, remove the glass doors by releasing the two spring latches at the top and 2 spring latches at the bottom of each door frame. Check to make sure there is no hidden damage to the unit. Take a moment to plan out the gas, venting and electrical route. It is best to start with the gas line first, followed by the vent system and electrical supply requirements.

This fireplace requires no hearth extension. Combustible material on the floor may be installed up to the fireplace.

Install the fireplace without the Surround panels attached and make all gas, venting and electrical connections.

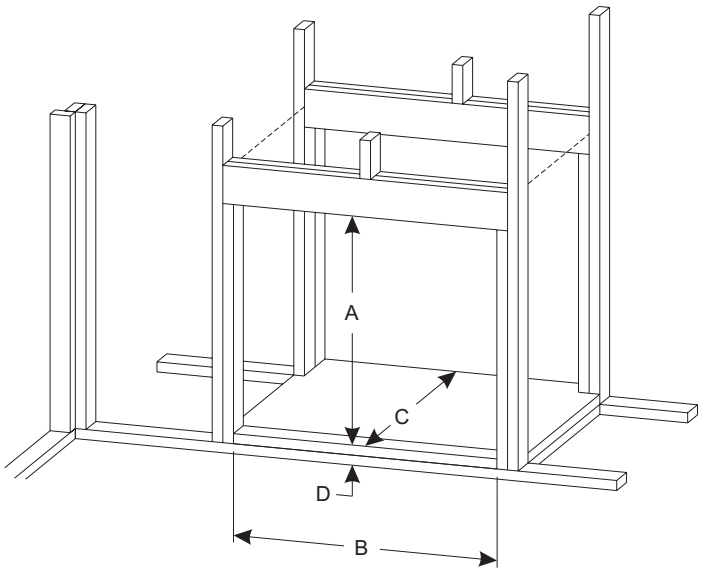
To complete the installation, install the Surround panel assemblies. Refer to the instructions included with the surround panel kit to install properly.

Framing and Finishing

1. Choose unit location.
2. Frame out opening for fireplace as shown in Figures 8 through 10.
3. The fireplace should be installed on a metal or wood panel extending the full width and depth of the appliance. The vertical dimensions must be adjusted when a metal or wood panel is placed beneath the appliance.
4. Install the side framing brackets (4 per side) using the pilot holes provided behind the side flanges on the fireplace outer wrap.
5. Secure the unit to the wall opening with common screw type fasteners.
6. Maintain combustible clearances as shown by Figures 11 through 14.

Note: A combustible header may rest on top of the standoff spacers. Screws may be installed through the top of the standoff spacers and into the header to add stability of the spacer if desired.

7. Noncombustible headers may be used above the fireplace to maintain structural integrity, providing sufficient backing for noncombustible finishing materials.
8. The finished wall surface materials must be non-combustible for a distance of at least 6" above the top of the fireplace outer cabinet.



Fireplace Framing Dimensions (in inches)				
	"A"	"B"	"C"*	"D"
Model	Framing Height	Framing Width	Framing Depth	Elevated Base Opening Height
DLCX36SP	41 1/2"	40 1/2"	17"*	3" Min.

Attention: Add height of base (from finished floor) to "A" Dimension.

Framing dimension A includes a three inch clearance for standoffs on top of fireplace.

*Dimension "C" assumes use of 1/2" wall board flush to both front faces.

Figure **8**

FIREPLACE INSTALLATION INSTRUCTIONS (continued)

Locating Fireplace

Before setting fireplace into the framed opening, attach the framing brackets to the fireplace and secure to framing. The framing brackets may be installed on the fireplace in the flat state. Once the fireplace is placed into the framed opening, the brackets can be hand bent over the framing and secured. This allows the fireplace to be inserted into the pre-framed opening. Different hole locations can be used for finishing materials with thicknesses of 3/8", 1/2" and 3/4". Secure the brackets with screws provided using two (2) per framing bracket. **See** Figure **9.**

Framing brackets should fit directly against framing material. Use at least one (1) nail or screw per bracket to secure in place.

IMPORTANT! Check squareness of all openings of the fireplace prior to securing to the framed openings. **See** Figure **10.**

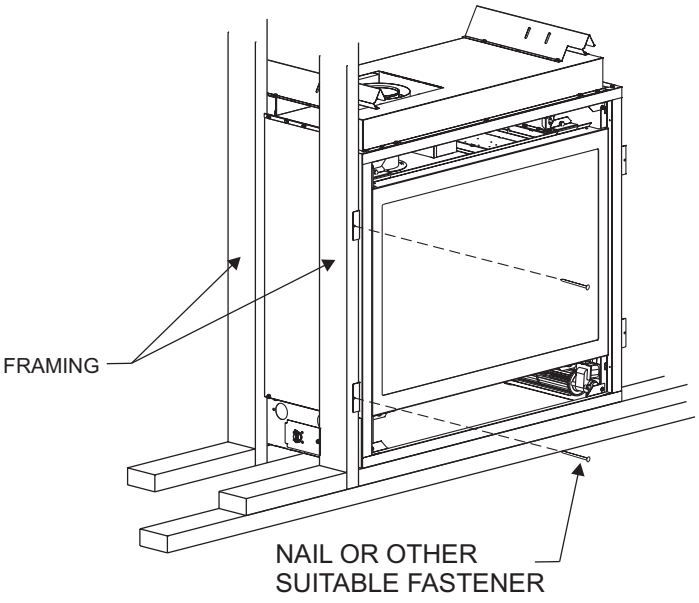


Figure **9**

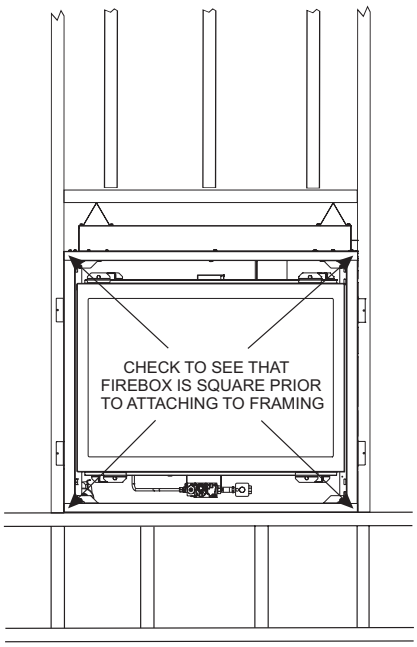


Figure **10**

WARNING: WHEN FINISHING THE FIREPLACE, NEVER OBSTRUCT OR MODIFY THE AIR INLET/OUTLET OPENINGS IN ANY MANNER. PROVIDE ADEQUATE CLEARANCES AROUND AIR OPENINGS.

CAUTION: PRIOR TO INSTALLATION, MEASURE THE FIREPLACE AND VERIFY FRAMING REQUIREMENTS, METHODS, AND WALL COVERING DETAILS PRIOR TO FRAMING CONSTRUCTION.

Surround Installation

To complete the installation of the fireplace, a Surround Kit specifically designed for use with this fireplace must be installed prior to use. Surround options shown on page 48 are available from your dealer. Follow the instructions included with the Surround Kit for proper installation.

INSTALLATION

Attention: If the appliance is installed directly on carpeting, tile or other combustible material other than wood flooring, it shall be installed on a metal or wood panel extending the full width and depth of the appliance. The vertical dimension must be adjusted when a metal or wood panel is placed beneath the appliance.

Finishing (Figure**s 11 and 12)**
Finish the walls with the material of your choice.

Warning: When finishing the fireplace never obstruct or modify the air inlet/outlet openings in any manner. Provide adequate clearances around air openings into the combustion chamber.

Caution: If the joints between the finished wall and the fireplace surround (top and sides) are sealed, a 300°F minimum sealant material must be used. These joints are not required to be sealed. Only non-combustible material (using 300°F minimum adhesive if needed), can be applied directly above the fireplace cabinet. See Figure 11.

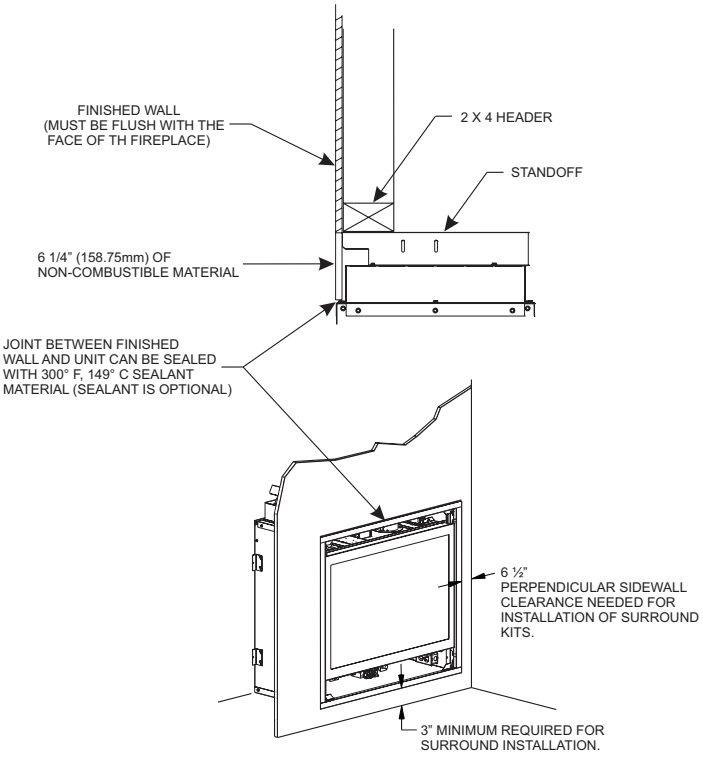
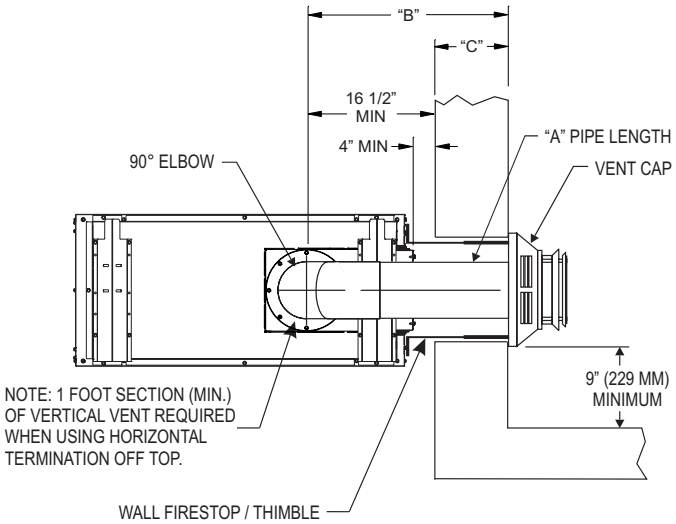


Figure **11**

Note: Fireplace shown with finish wall surfaces. A surround kit must be installed to complete installation.

VERTICAL, 90° ELBOW TO HORIZONTAL OUT THE WALL



"A"	"B"	"C"
6"	21 1/4" to 22 3/4" (540 mm to 578 mm)	4 3/4" to 6 1/4" (121 mm to 159 mm)
9"	24 1/4" to 25 3/4" (616 mm to 654 mm)	7 3/4" to 9 1/4" (197 mm to 235 mm)
12"	27 1/4" to 28 3/4" (692 mm to 730 mm)	10 3/4" to 12 1/4" (273 mm to 311 mm)

Figure **12**

VENT SYSTEMS

The following vent systems are acceptable for use with the DLCX36SP series fireplaces:
Simpson Duravent® PRO 4" - 6 ⅝"
Empire Horizontal Round Termination Kit DVVK-4RE. Refer to the vent kit instruction for additional installation requirements.
Empire Flexvent Kit DVVK-4F. Refer to page 35.
Empire Flexvent Kit DVVK-4FV. Refer to page 21.

Installing the Vent System

Vent System Installation Precautions
Before starting installation of vent kits, the installer should read these instructions and the Vent Kit Instructions to ensure that a proper vent installation is completed. Consult your local Building Codes before beginning the installation.

⚠ WARNING

THIS GAS FIREPLACE AND VENT ASSEMBLY MUST BE VENTED DIRECTLY TO THE OUTSIDE AND MUST NEVER BE ATTACHED TO A CHIMNEY SERVING A SEPARATE SOLID FUEL BURNING APPLIANCE. EACH GAS APPLIANCE MUST USE A SEPARATE VENT SYSTEM. COMMON VENT SYSTEMS ARE PROHIBITED.

Vertical Venting
The inlet and exhaust vent pipes **MUST** be connected to the proper collars on the unit **AND** to the termination cap or the unit will not operate.

Note: This also pertains to vertical vent systems installed on the outside of the building.

⚠ WARNING

MAJOR U.S. BUILDING CODES SPECIFY MINIMUM CHIMNEY AND/OR VENT HEIGHT ABOVE THE ROOF TOP. THESE MINIMUM HEIGHTS ARE NECESSARY IN THE INTEREST OF SAFETY. SEE FIGURES **42 AND 43 FOR MINIMUM HEIGHTS, PROVIDED THE TERMINATION CAP IS AT LEAST 2 FEET FROM A VERTICAL WALL AND 2 FEET BELOW A HORIZONTAL OVERHANG.**

Connecting the Vent Pipe

⚠ CAUTION

Sharp edges. Always use gloves when installing.

Vent Pipe Clearance
Note: Maintain one inch (1") of clearance around vertical vent pipe. **See** Figure **13.** For horizontal vent, maintain a minimum 1" clearance to the bottom and sides of the vent, and 3" clearance to combustibles above the vent pipe. **See** Figure **14.**

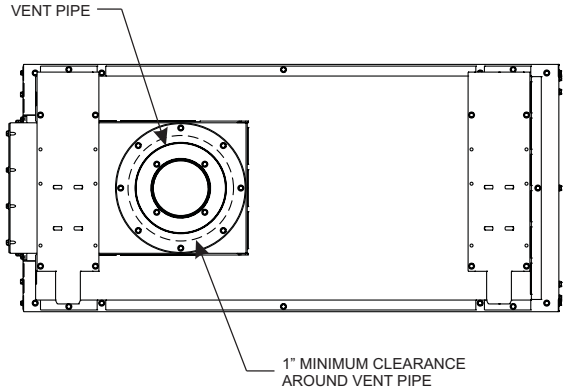


Figure **13**

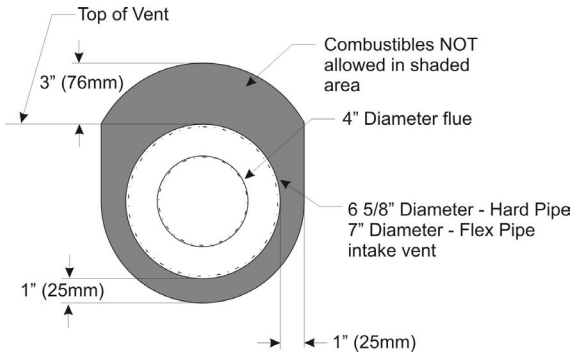


Figure **14**

VENTING FIREPLACE - TOP

To Use the Vent Graph (Figure **15)**

1. Determine the height of the center of the horizontal vent pipe. Using this dimension on the Sidewall Vent Graph, locate the point it intersects with the slanted graph line.
2. From the point of this intersection, draw a vertical line to the bottom of the graph.
3. Select the indicated dimension, and position the unit in accordance with same.

EXAMPLE A: (Top Vent Connections with Vertical Termination).

If the vertical dimension from the floor of the unit is 35 feet, the horizontal run to the outer wall flange must not exceed 6.5 feet.

EXAMPLE B: (Top Vent Connections with Vertical Termination)

If the vertical dimension from the floor of the unit is 6.5 feet, the horizontal run to the outer wall flange must not exceed 14.5 feet.

SPECIAL NOTE: For each 45 degree elbow installed in the horizontal run, the length of the horizontal run MUST be reduced by 18" (45cm). This does not apply if the 45 degree elbows are installed on the vertical part of the vent system. Reduce 3' for every 90° elbow.

Example: According to the chart the maximum horizontal vent length is 20' and if two 45 degree elbows are required in the horizontal vent it must be reduced to 17'.

The maximum number of 45 degree elbows permitted per side wall installation is two (2). These elbows can be installed in either the vertical or horizontal run.

Note: On vertical venting the first elbow is not counted.

Venting Graph (Dimensions in Feet)

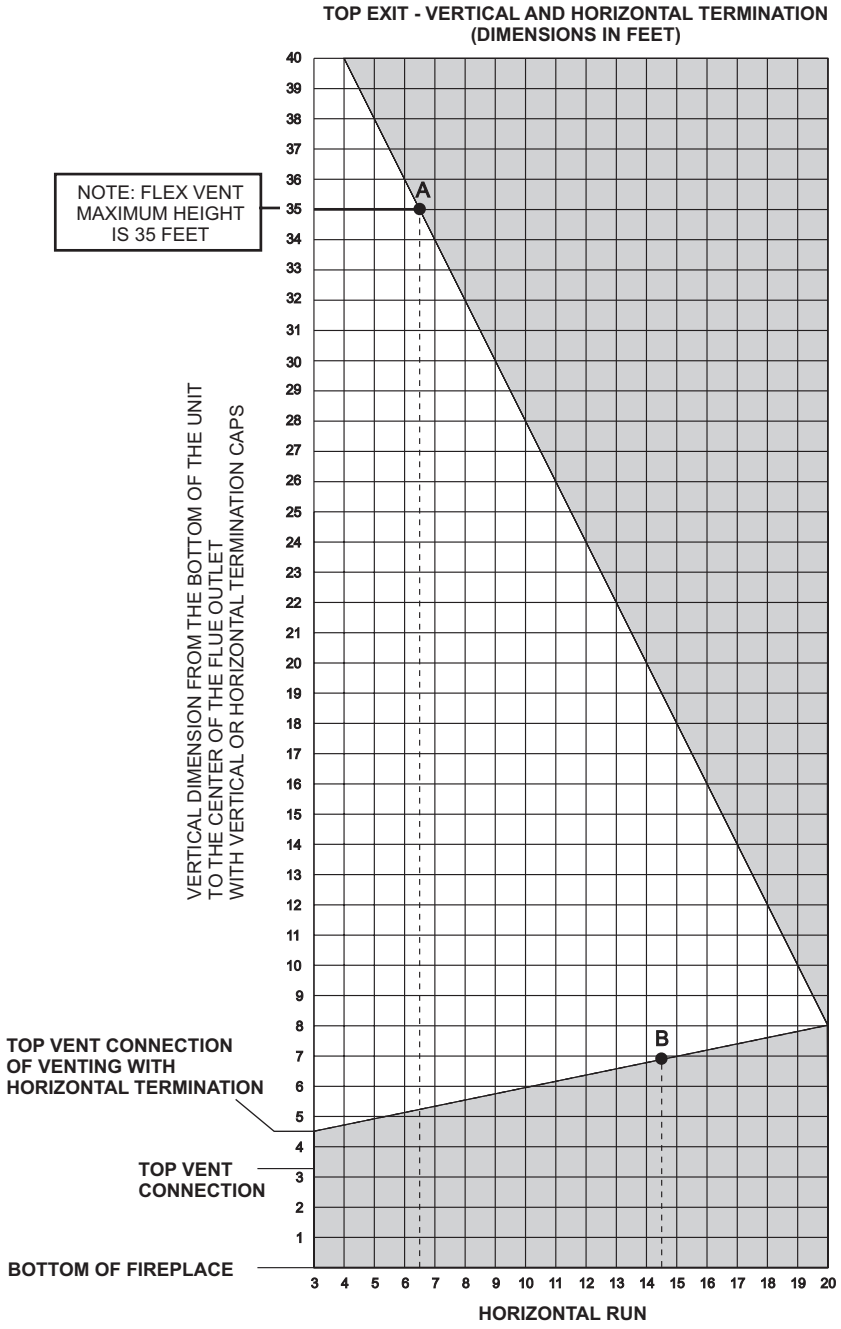

TOP EXIT - VERTICAL AND HORIZONTAL TERMINATION
(DIMENSIONS IN FEET)
NOTE: FLEX VENT MAXIMUM HEIGHT IS 35 FEET
A
B
VERTICAL DIMENSION FROM THE BOTTOM OF THE UNIT TO THE CENTER OF THE FLUE OUTLET WITH VERTICAL OR HORIZONTAL TERMINATION CAPS
TOP VENT CONNECTION OF VENTING WITH HORIZONTAL TERMINATION
TOP VENT CONNECTION
BOTTOM OF FIREPLACE
HORIZONTAL RUN
40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Figure **15**

☐ Acceptable vertical and horizontal vent run.
Rigid Venting • 40' maximum vertical run
• 20' maximum horizontal run
Flex Venting • 35' maximum vertical run
• 20' maximum horizontal run

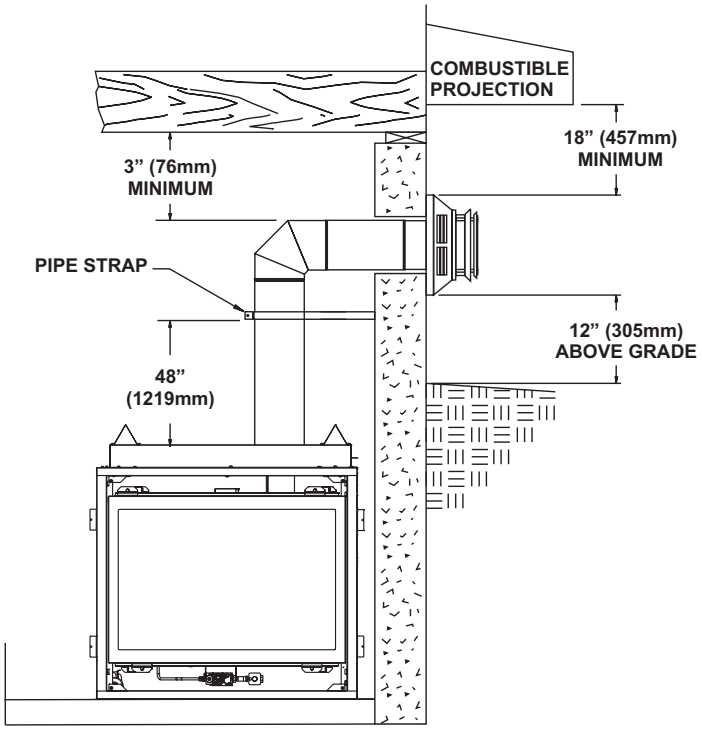
■ Unacceptable vertical and horizontal vent run.

VENTING FIREPLACE - TOP (continued)

Below Grade Installation

When it is not possible to meet the required vent terminal clearances of 12" (305mm) above grade level, a snorkel kit is recommended. See Figures 41a and 41b . It allows installation depth down to 7" (178mm) below grade level. The 7" (178mm) is measured from the center of the horizontal vent pipe as it penetrates through the wall.

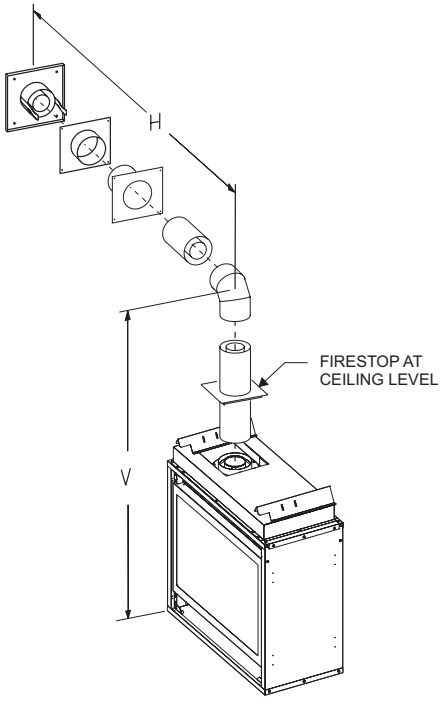
Ensure the sidewall venting clearances are observed. If venting system is installed below ground, we recommend a window well with adequate and proper drainage to be installed around the termination area.



TYPICAL BASEMENT INSTALLATION

Figure **16**

Examples of possible venting systems using one (1) 90° elbow. Eight (8) feet is listed as minimum vertical vent run with 20 feet of maximum horizontal vent run. Vertical dimensions are based on centerline to centerline of pipe. Horizontal dimensions are based on centerline of pipe to end of termination.

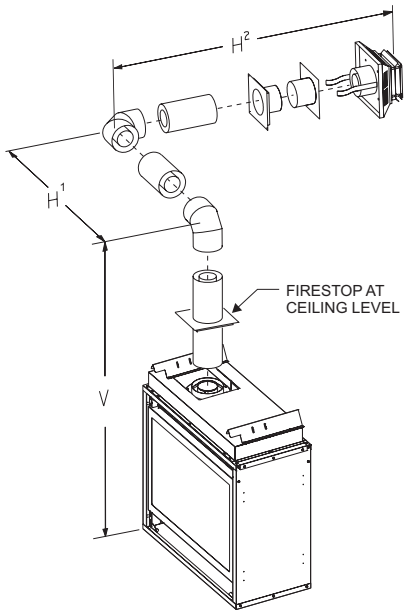


SEE GRAPH FOR PERMISSIBLE "H" AND "V" DIMENSIONS

Figure **17**

Examples of possible venting systems using two (2) 90° elbows. V is listed as minimum vertical dimensions and H1 + H2 is the total of maximum horizontal dimensions. The maximum vertical and horizontal distances for two (2) 90° elbows as shown in Figure 18 is 20 feet.

Attention: Refer to Figures 19-21 for additional venting requirements.



SEE GRAPH FOR PERMISSIBLE "H" AND "V" DIMENSIONS
NOTE: H1 AND H2 MUST BE ADDED TOGETHER TO USE CHART

Figure **18**

VENTING FIREPLACE - TOP (continued)

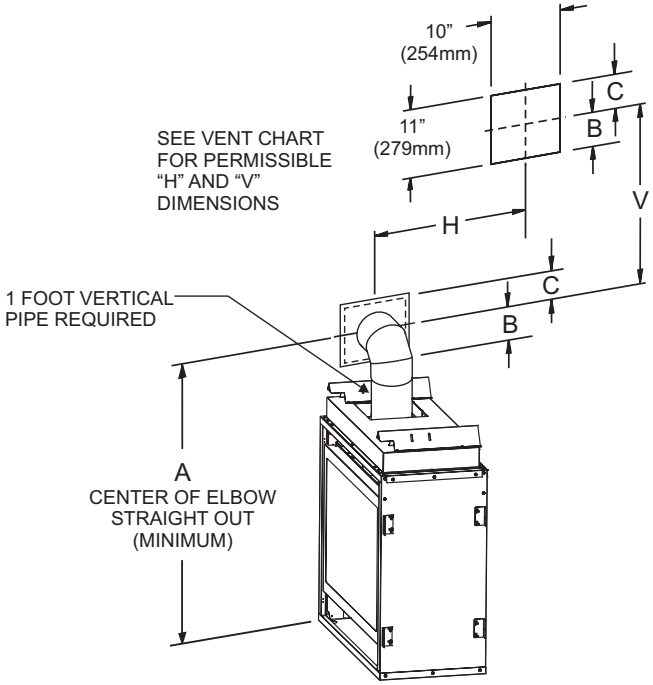


Figure **19**

MINIMUM HOLE LOCATION DIMENSIONS FOR THROUGH THE WALL HORIZONTAL INSTALLATIONS WITH 90 DEGREE ELBOW AND 1 FOOT VERTICAL VENT OFF TOP OF FIREPLACE

FIREPLACE SERIES	HARD ELBOW DIMENSIONS		
	"A"	"B"	"C"
DLCX36SP	53" (1346.2mm)	4 1/2" (114.3mm)	6 1/2" (165.1mm)

Positioning the Fireplace

Determine the exact position of the appliance so the direct vent termination will be centered (if possible) between two (2) studs. This will avoid any extra framing. All vent kit pipes should be assembled on the unit after the unit is moved into the final position.

Cutting the Hole (Figure **19)**

After the fireplace has been positioned in its permanent location, the hole through the exterior wall of the house can be cut. This hole must be 11" (279.4 mm) high x 10" (254mm) wide with its center line determined by the amount of vertical rise and horizontal run of the termination. **See** Figure **19.**

When locating the hole it must be noted that the bottom of the cap must be 12" (305mm) above the ground level, and top of the cap must be no less than 18" (457mm) below a combustible projection, and no closer than 9" (229mm) to any wall running parallel to vent termination. **See** Figures **32, 33, and 36.**

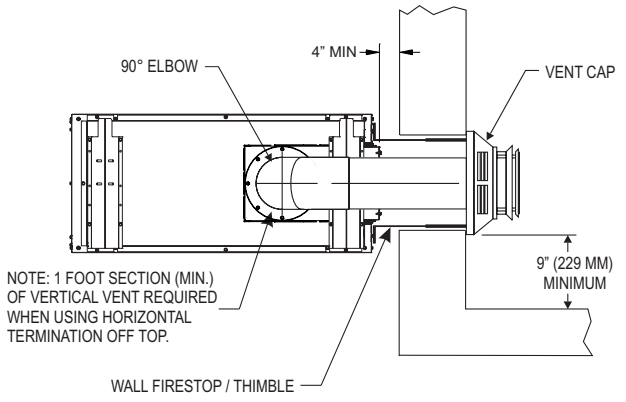
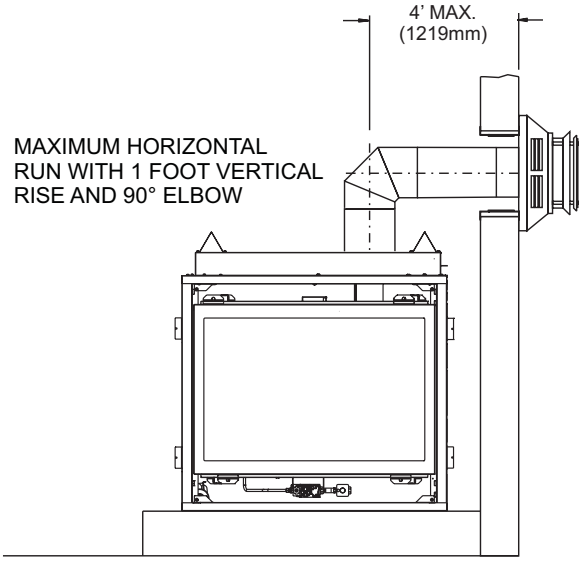


Figure **20**



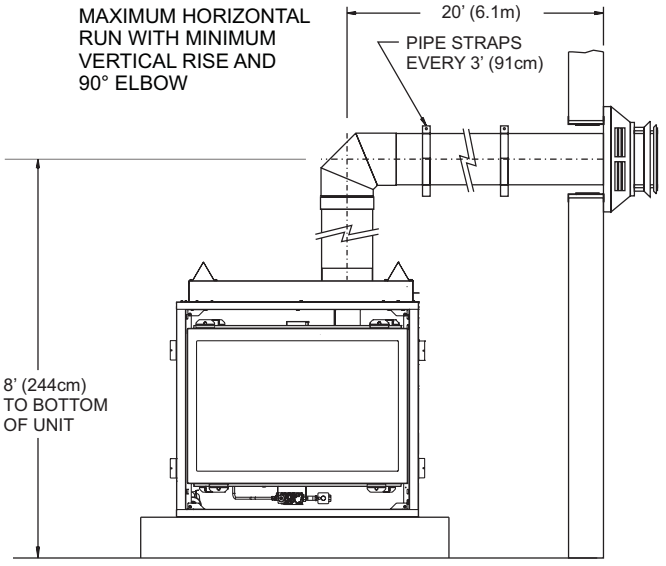


Figure **21**

DVVK-4FV DIRECT VENT TERMINATION KIT

Installation Instructions

This termination kit can only be used with Empire Comfort Systems direct vent fireplaces listed for use with DVVK-4FV Vertical Flex Vent Kit. Please review the instructions packaged with your fireplace and verify the fireplace model number. Check that this flex vent system is listed for use with your fireplace model prior to starting the installation.

This vent kit may be installed as an OEM installation in a manufactured home (USA only) or mobile home and must be installed in accordance with the manufacturer's instructions and the manufactured home construction and safety standard, Title 24 CFR, Part 3280 or Standard for Installation in Mobile Homes, CAN/CSA Z240 MH.

CAUTION

All Fireplaces listed for use with the DVVK-4FV will operate safely when installed in accordance with this instruction manual. Read all instructions before starting installation, then follow these instructions carefully to maximize fireplace performance and safety. Report damaged parts to your dealer.

WARNING

Any common venting of the gas appliance using the DV vent kit with other gas appliances is not allowed. Do not connect this appliance to a chimney flue servicing a separate solid fuel-burning appliance.

WARNING

Failure to follow these instructions may create a possible fire hazard and will void the warranty.

WARNING

Always maintain minimum clearances around vent systems. The minimum clearance to combustibles for horizontal runs of vent pipe is 3 inches from the top, and 1 inch from the sides and bottom of the vent system. Do not pack the open air spaces around the fireplace or flue with insulation or other materials. Any horizontal run must have a 1/4" rise for every one (1) foot of run towards the vent termination. The vent above the roof must terminate vertically.

WARNING

Contact your Local Building and Fire Officials about restrictions and installation inspections in your area.

IMPORTANT SAFETY INFORMATION

- The vertical termination cap MUST be vented directly to the outside. The termination kit MUST NEVER be connected to a chimney flue(s) servicing a separate solid-fuel burning appliance or any other appliances.
- Termination cap MUST NOT be mounted horizontally.
- The flexible vent pipe cannot be intermingled with any of the rigid vent pipe section(s). DO NOT connect two sections of flexible vent pipe together to achieve a longer length without the use of approved connectors.
- The installation must conform with local codes or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1 (in the United States) or with the current installation code CAN/CGA B149 (in Canada).
- Only Direct Vent fireplaces approved for use with Empire Comfort Systems, Inc. DVVK-4FV termination kit shall be used. See PARTS LIST/ILLUSTRATIONS section for vent component identification.
- Horizontal vent runs must be supported every 2 feet using wall straps. Vertical runs must be supported every 3 feet using wall straps. Slip wall straps loosely on to pipe. Attach installer provided straps to framing members using nails or screws.
- The fireplace and venting system should be inspected before initial use and at least annually by a qualified field service person. Inspect the external vent cap on a regular basis to make sure that no debris is interfering with the airflow. Inspect entire venting system to ensure proper function.
- Please refer to the fireplace instructions for information on Termination Cap clearances.

PRE-INSTALLATION INFORMATION:

Items Required For Installation:

Tools	Building Supplies
Phillips Screwdriver Hammer Saw and/or saber saw Level Measuring Tape Electric Drill and Bits Pliers Square Tin Snips	Framing Materials Wall Finishing Materials Caulking Material (Noncombustible) Support Strap supplies

Before You Start:

Plan your installation. Read these instructions and the fireplace installation manual before installing unit and vent system. Set unit in place and survey how best to vent the unit. After the vent configuration has been decided, stretch the flex pipe components out, then trim off what will not be needed.

Refer to the fireplace installation manual for information on vertical venting requirements. The maximum length of vent when using flex venting is 35 feet total. Contact your dealer or distributor for information on flex vent extension kits that may be added to the DVVK-4FV kit, in order to terminate up to 35 feet. Available extension kits include the DVEK-10 (10' Flex) or the DVEK-25 (25' Flex) extension kits. The extension kits include connection hardware.

Installation of the Vertical Flex Termination Kit

WARNING

Ensure that the venting system exits the structure through the roof and does not terminate less than 12 inches (305mm) above the roof.

WARNING

Refer to your fireplace homeowner's manual for the minimum and maximum venting requirement of your fireplace prior to installation. Failure to do so may cause a fire hazard.

WARNING

This flexible pipe termination kit is ONLY for vertical terminations.

WARNING

Any horizontal run section must have a 1/4" rise for every one (1) foot of run towards the vent termination. Never allow the vent pipe to run downward. This could cause high temperatures and may present a fire hazard. This vertical kit may incorporate two (2) 90 degree bends, but must terminate vertically.

CAUTION

This flex vent kit can be installed either vertically or horizontally off of Direct Vent Series fireplaces but must only terminate vertically.

WARNING

Because of sharp edges, always use gloves when handling the flex vent components.

CAUTION

Vent connections should overlap a minimum of 1" for proper sealing.

CAUTION

Always stretch and secure venting with metal strapping secured with nails (nails and strapping not supplied) to ensure that the flex vent runs remain true.

INSTALLATION NOTE:

If space permits, it is generally easier to attach venting in the top vent configuration.

DVVK-4FV DIRECT VENT TERMINATION KIT (continued)

Step-By-Step Installation For Flex DV Kit

1. Unpack vent components and check all items for shipping damage.
2. For this venting system to operate as designed it is dependent on the use of all parts and procedures detailed in these instructions. Failure to follow these instructions may potentially affect the performance of this vent system and the attached appliance.
3. As per the fireplace manufacturer's instructions, replace the existing 6 5/8" diameter fireplace vent adapter with the 7" diameter flex vent fireplace adapter included in the vent kit. Install the adapter collar with the screws removed from the standard fireplace collar. Refer to the fireplace manual for additional information on the vent collar removal and installation.
4. Once the fireplace location has been determined, mark the ceiling where the flex vent will pass through. Cut an opening for installation of the firestop thimble assembly. The opening must measure a minimum of 9-1/2" x 9-1/2" square. **See** Figure **22.**
5. Next, determine the location for the cutout in the roof opening. This opening must be large enough to provide a minimum 1" air space clearance from the vertical vent pipe to any combustible framing.
6. Install the Firestop/Thimble assembly to the framed opening in the ceiling using common nails or screws.
   Note: The thimble assembly is adjustable up or down as needed within the firestop. It is also designed with a pivoting firestop for use with 0 - 3/12 pitch cathedral ceilings.
7. To begin vent system assembly, first layout all the vent components on the floor in the order in which they will be assembled.
8. Stretch the 4" diameter inner flex flue and 7" diameter outer flex vent to the maximum length of 6 feet.
9. Install the spring spacers provided around the 4" diameter flex flue at 1 foot intervals, then slide the flue pipe with spacers into the 7" diameter outer flex vent pipe. Make sure the springs are spaced evenly starting at 12 inches from the fireplace collar. **See** Figure **23.**

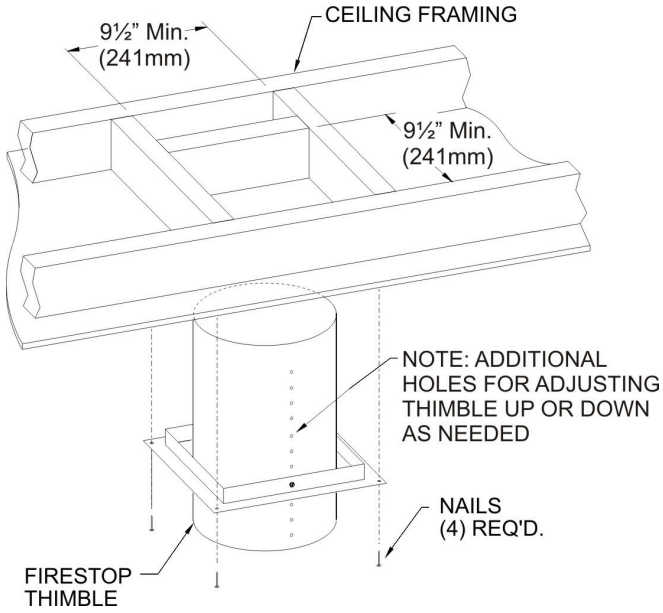


Figure **22**

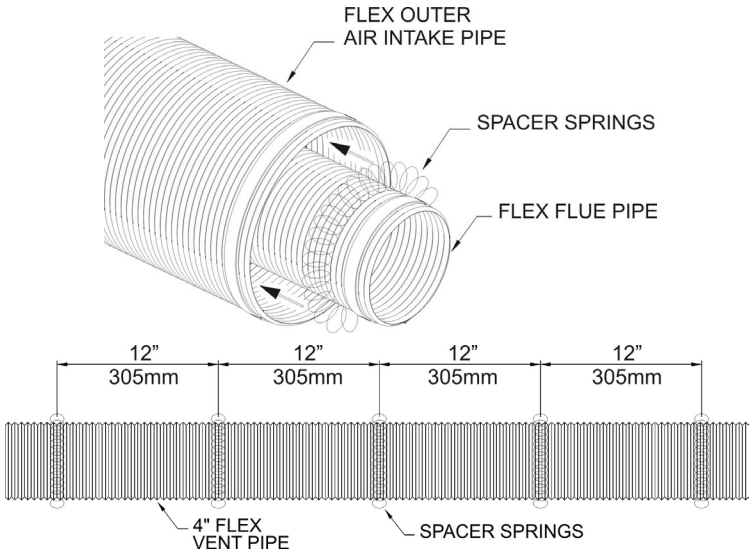


Figure **23**

DVVK-4FV DIRECT VENT TERMINATION KIT (continued)

10. With the flex vent assembly and the 48” long hard pipe components laid out on the floor, begin securing these parts together. First, apply a generous bead of silicone sealant to the inside of the 4” diameter flex flue (not the end with the pre-installaed connector), then slide the flex flue over the 4” diameter hard pipe flue. Be sure to overlap at least 1-1/4”. Secure this connection with a 4” diameter band clamp provided. Be careful not to damage or tear the flex flue when tightening clamp.
11. Repeat the connection process for the outer 7” diameter flex vent to hard pipe connection. Use silicone sealant at this joint also, overlap at least 1-1/4”, then secure the joint with the 7” diameter band clamp provided. Be careful not to damage or tear the flex vent pipe when tightening the clamp.
12. While the venting is still on the floor, assemble the roof jack components as shown in Figure 24 and pre-install the roof jack assembly to the hard pipe approximately 18” from the top end of the hard pipe.
13. Now the pre-assembled vent system may be carried to the roof, then lowered through the roof cutout opening (see step 5). Feed the flex vent end down through the roof opening and firestop/thimble assembly installed in steps 4 through 6.
14. Secure the roof support assembly to the roof sheathing with at least (4) nails/screws through each support bracket. Check that the combustible clearances through the roof framing will maintain at least a 1” clearance from the vent pipe.
15. Determine how high the vent terminal should be located above the roof line based on the roof pitch information shown in Figure 25. Adjust the vent system height by loosening the pre-installed roof support pipe clamp and sliding the vent pipe up or down as pre-determined, then re-tighten the pipe clamp. Install a couple of sheet metal screws through the pipe clamp into the outer hard vent pipe to lock in place.
16. Check to make sure that the bottom end of the flex vent is long enough to reach the fireplace adapter collars. If too long, trim off the extra flex vent not needed.

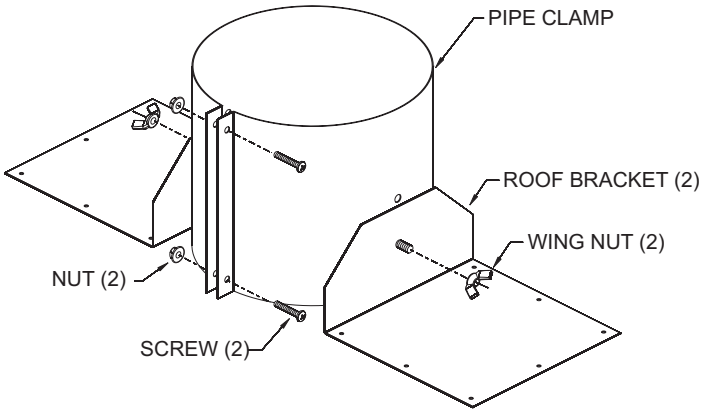
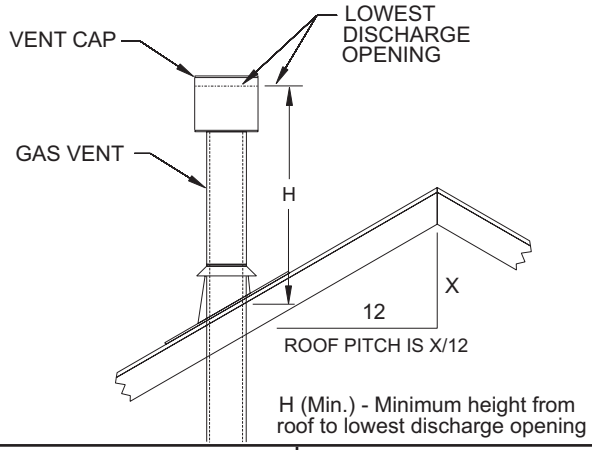


Figure **24**



ROOF PITCH	H (Min.)
Flat to 6/12	12” (305mm)
6/12 to 7/12	15” (381mm)
Over 7/12 to 8/12	18” (457mm)
Over 8/12 to 16/12	24” (610mm)
Over 16/12 to 21/12	36” (914mm)

Figure **25**

DVVK-4FV DIRECT VENT TERMINATION KIT (continued)

17. To attach the vent connections at the fireplace, be sure the 7” diameter adapter collar has been installed per step 3. Apply a bead of silicone sealant to the 4” diameter flex connector, then slide the flex pipe adapter collar into the fireplace flue collar and secure by installing a minimum of two (2) screws through the flue collar and into the adapter. **See** Figure **26.**
18. Apply sealant to the 7” diameter adapter collar, slide outer flex vent over the collar, then secure with a 7” diameter band clamp. **See** Figure **26.**
19. Once the lower connections are made and the flex pipe is secured with support bands as required (3 feet minimum between supports) then the roof flashing can be installed. **See** Figure **27.**
20. Install the roof flashing, and seal using common constructions practices.
21. An additional storm collar band is provided in kit that may be used as an attic insulation shield. The collar can be installed around the flex pipe (or hard pipe) just above the firestop thimble. This collar will act as a shield to prevent blown insulation from entering the thimble.
22. To complete the vent installation, install the vent termination cap to the top of the hard vent pipe assembly. Mate up the flue and outer telescopes with the hard pipe assembly, then secure by installing a minimum of two (2) sheet metal screws into the overlapped flanges of the cap and pipe.
23. Figure 28 shows a completed installation with components identified and other installation information such as heights and clearance to combustibles.

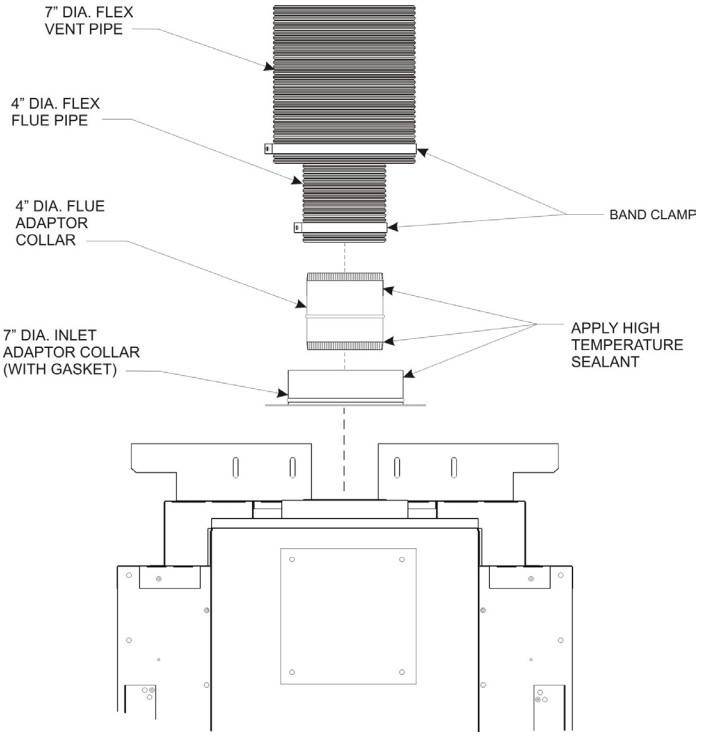


Figure **26**

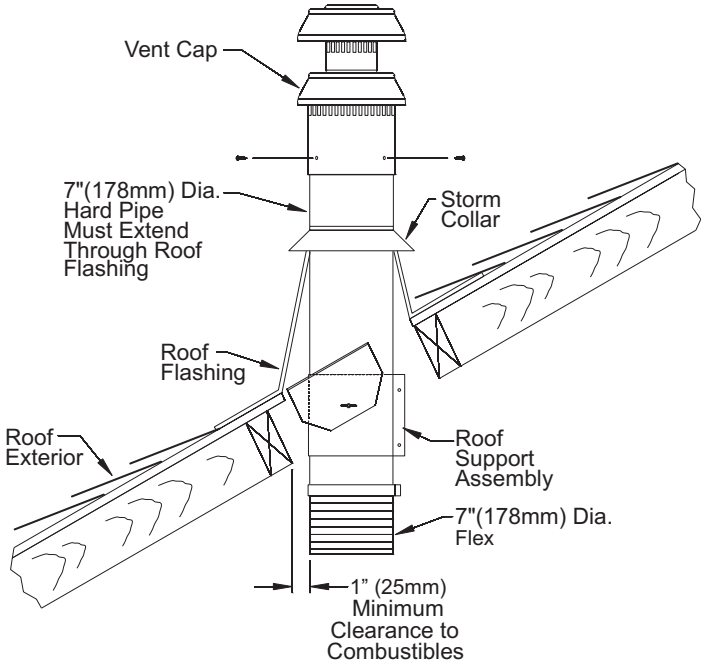


Figure **27**

DVVK-4FV DIRECT VENT TERMINATION KIT (continued)

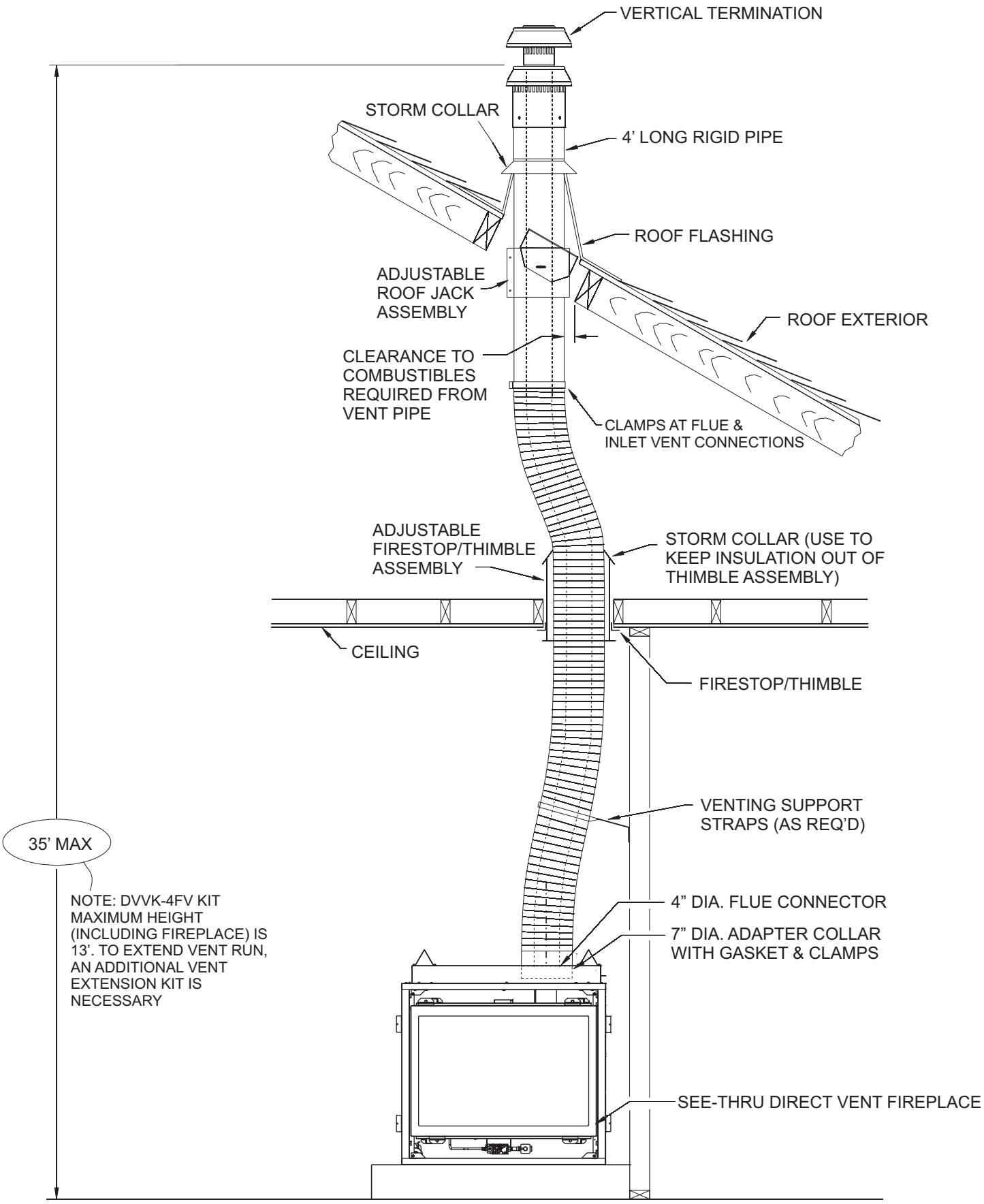
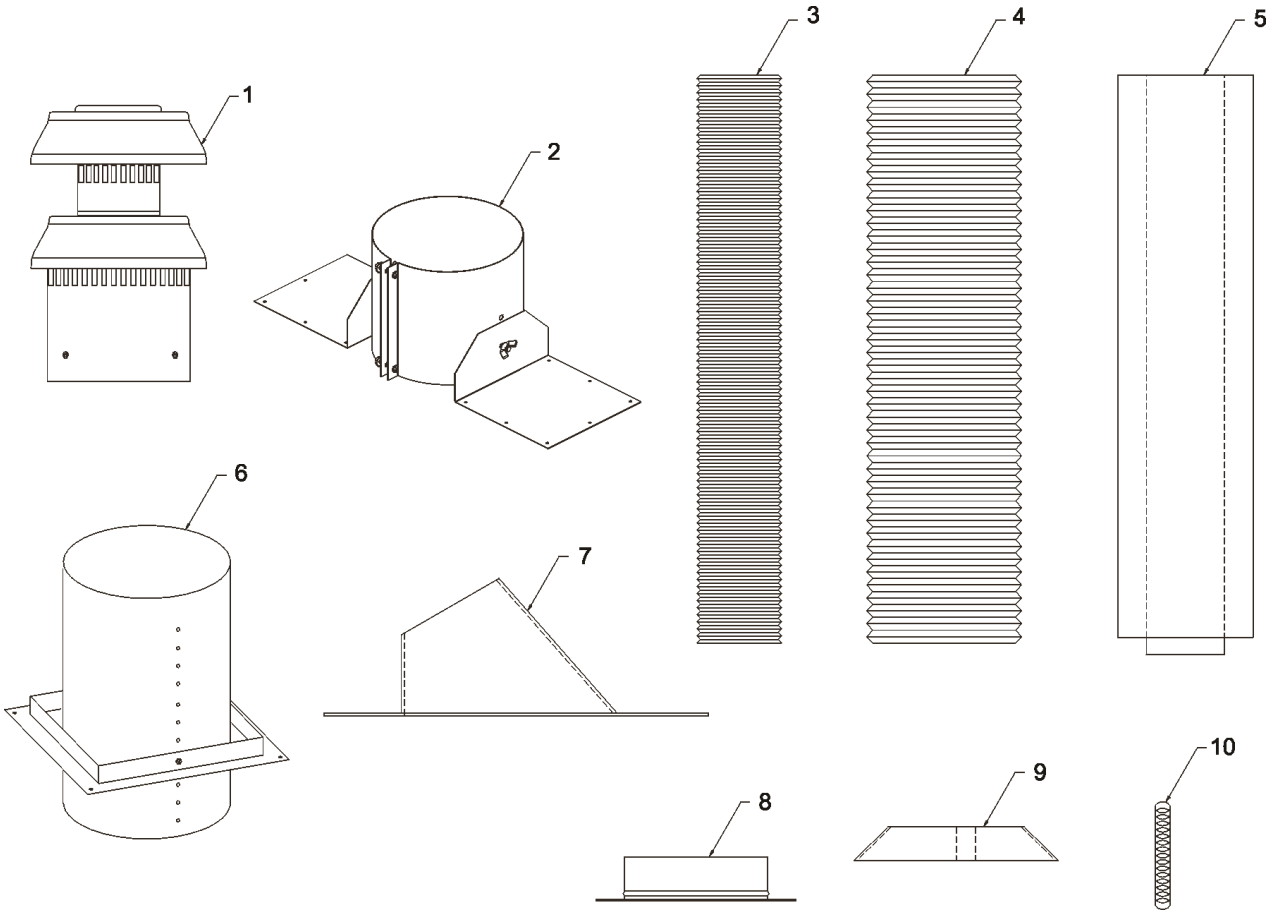

VERTICAL TERMINATION
STORM COLLAR
4’ LONG RIGID PIPE
ROOF FLASHING
ADJUSTABLE ROOF JACK ASSEMBLY
ROOF EXTERIOR
CLEARANCE TO COMBUSTIBLES REQUIRED FROM VENT PIPE
CLAMPS AT FLUE & INLET VENT CONNECTIONS
ADJUSTABLE FIRESTOP/THIMBLE ASSEMBLY
STORM COLLAR (USE TO KEEP INSULATION OUT OF THIMBLE ASSEMBLY)
CEILING
FIRESTOP/THIMBLE
VENTING SUPPORT STRAPS (AS REQ’D)
35’ MAX
NOTE: DVVK-4FV KIT MAXIMUM HEIGHT (INCLUDING FIREPLACE) IS 13’. TO EXTEND VENT RUN, AN ADDITIONAL VENT EXTENSION KIT IS NECESSARY
4” DIA. FLUE CONNECTOR
7” DIA. ADAPTER COLLAR WITH GASKET & CLAMPS
SEE-THRU DIRECT VENT FIREPLACE

Figure **28**

DVVK-4FV DIRECT VENT TERMINATION KIT (continued)

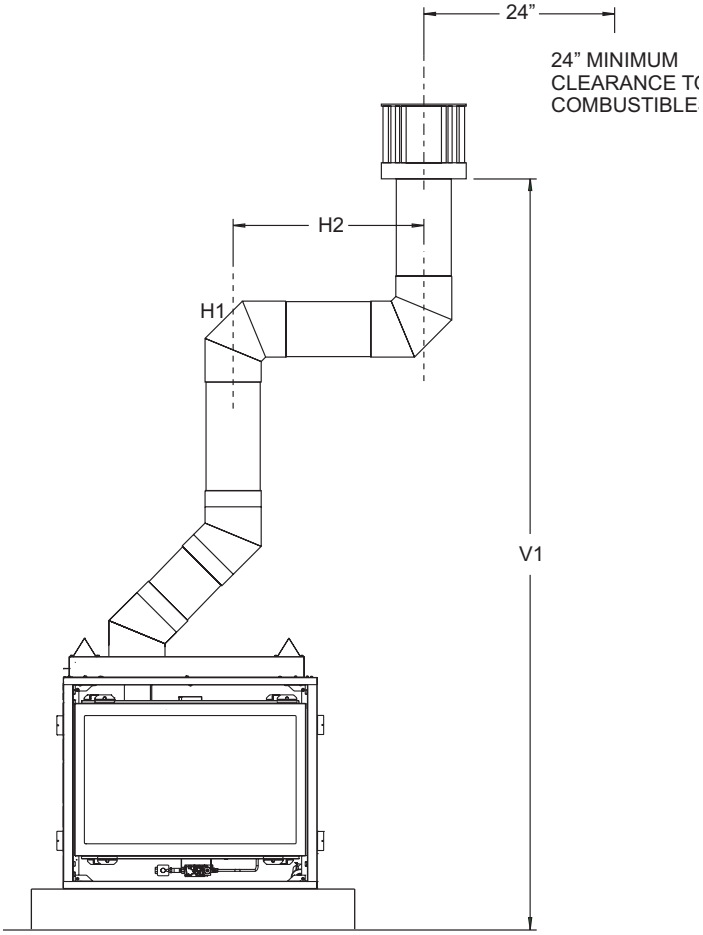
Vertical Flex Termination Kit



Item Number	Item Description	Repair Part No.	Quantity Supplied
1	4”/7” Vertical Termination Cap	MF100038	1
2	Roof Support Kit	MF100503	1
3	2 Ply Alum Flex 4” Diameter by 6 ft.	MF04ALA2F006	1
4	2 Ply Alum Flex 7” Diameter by 6 ft.	MF07ALA2F006	1
5	4”/7” x 48” Rigid Pipe Assembly	MF100554	1
6	Firestop Thimble Assembly	MF100124	1
7	Roof Flashing (0/12 to 6/12)	MF100091	1
8	7” Flex Adapter Collar with Gasket	MF100524	1
9	7” Storm Collar	MF100147	2
10	Spring Spacers	MF100548	5
N/S	Clamp 4” Diameter	MF100330	2
N/S	Clamp 7” Diameter	MF100534	2
N/S	#8 x 1/2” Self Drilling Screws	N/A	20
N/S	HT Silicone	N/A	1
N/S	#8 x 5/8” Self Drilling Screws	N/A	10

N/S - Not Shown

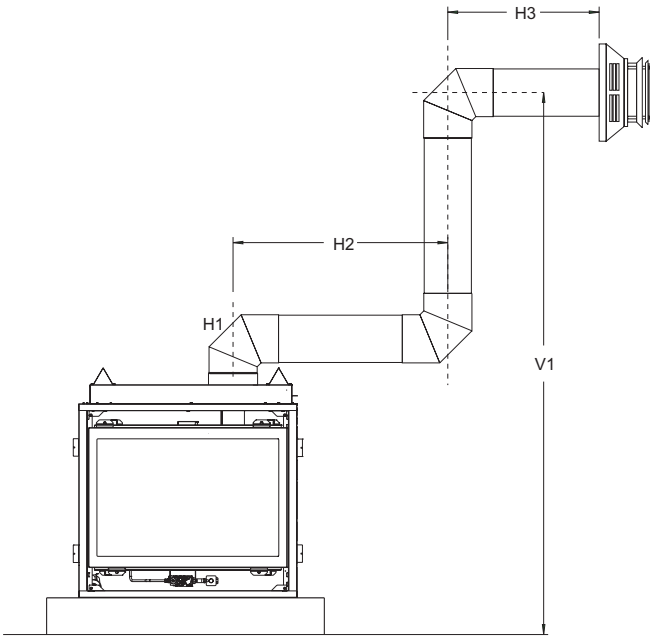
EXAMPLES - TOP VENT RUN



Example
H2 = 2ft
2 - (90° + 90°) = 6ft
V1 = 21ft

H = 8ft V = 15ft

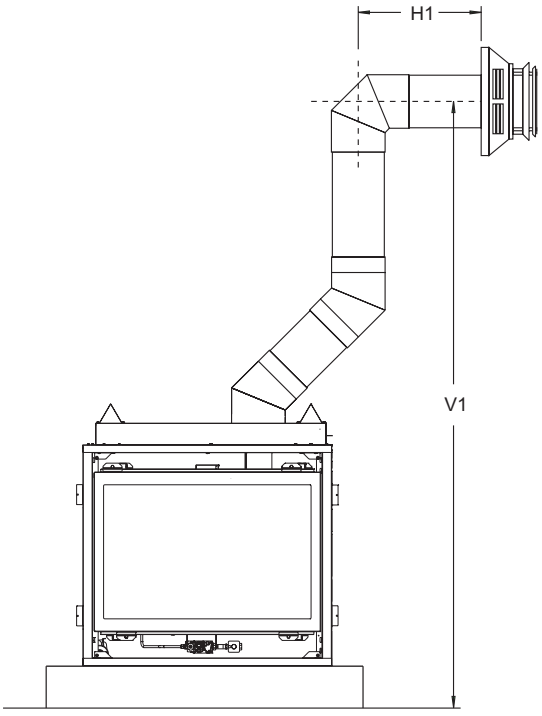
Figure **29**



Example
H2 3ft, H3 1ft = 4ft
(90° + 90° + 90°) = 6ft
V1 = 21ft

H = 10ft V = 21ft

Figure **30**



Example
H1 = 2ft
V1 = 20ft

H = 2ft V = 20ft

Figure **31**

TERMINATION CLEARANCES

Termination clearance for buildings with combustible and noncombustible exteriors.

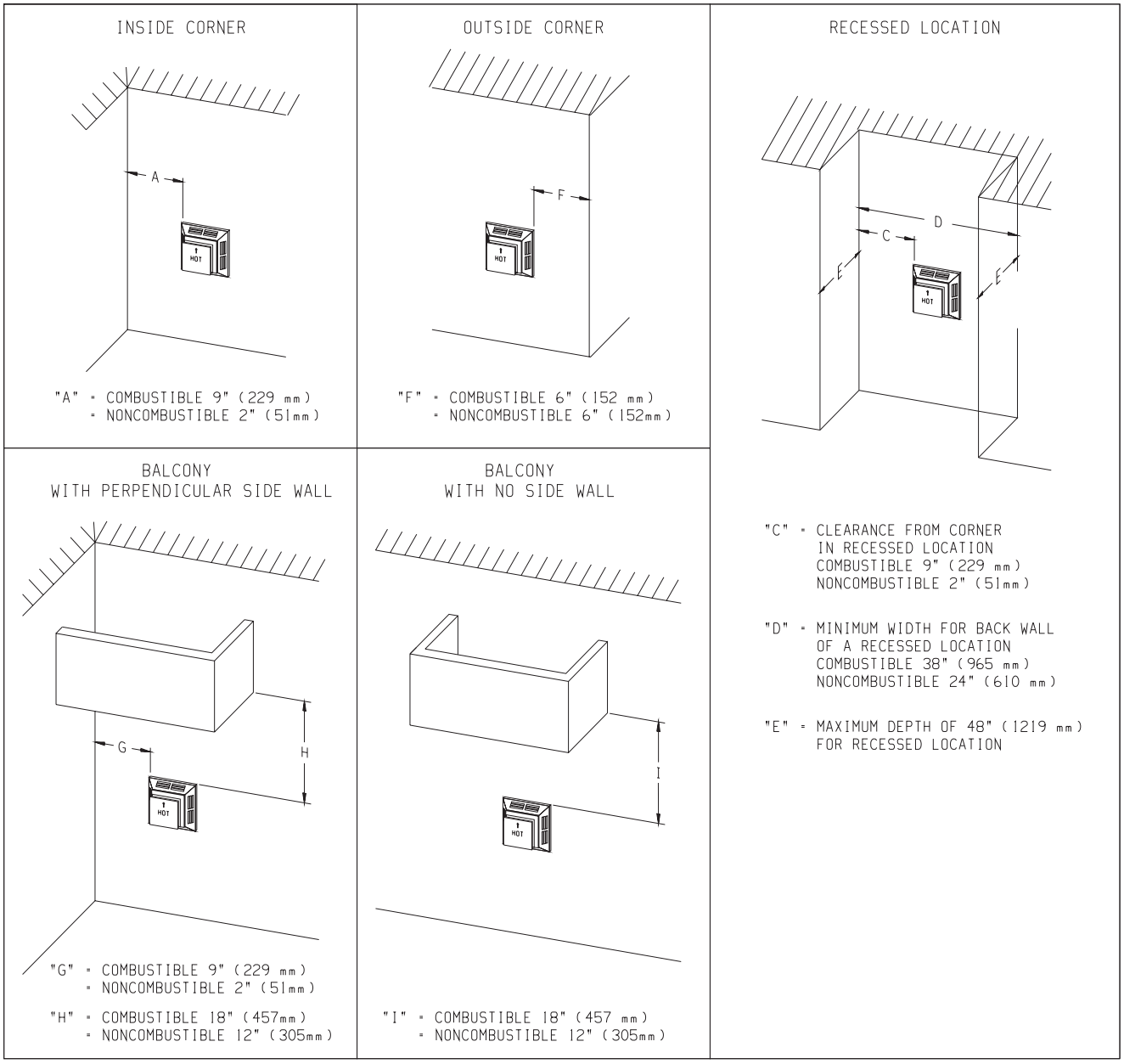


Figure **32**

Vertical Sidewall Installations

Important! Minimum clearance between vent pipes and combustible materials is three (3") (76mm) on top, and (1") (25mm) on bottom and sides.

Important! When vent termination exits through foundation less than 20" below siding outcrop, the vent pipe must extend outward so that the horizontal vent terminal is located flush to, or beyond the outcrop siding.

Information on Various Venting Routes and Components

Important: It is always best to locate the fireplace in such a way that minimizes the number of offsets and horizontal vent length.

Since it is very important that the venting system maintain its balance between the combustion air intake and the flue gas exhaust, certain limitations as to vent configurations apply and must be strictly adhered to.

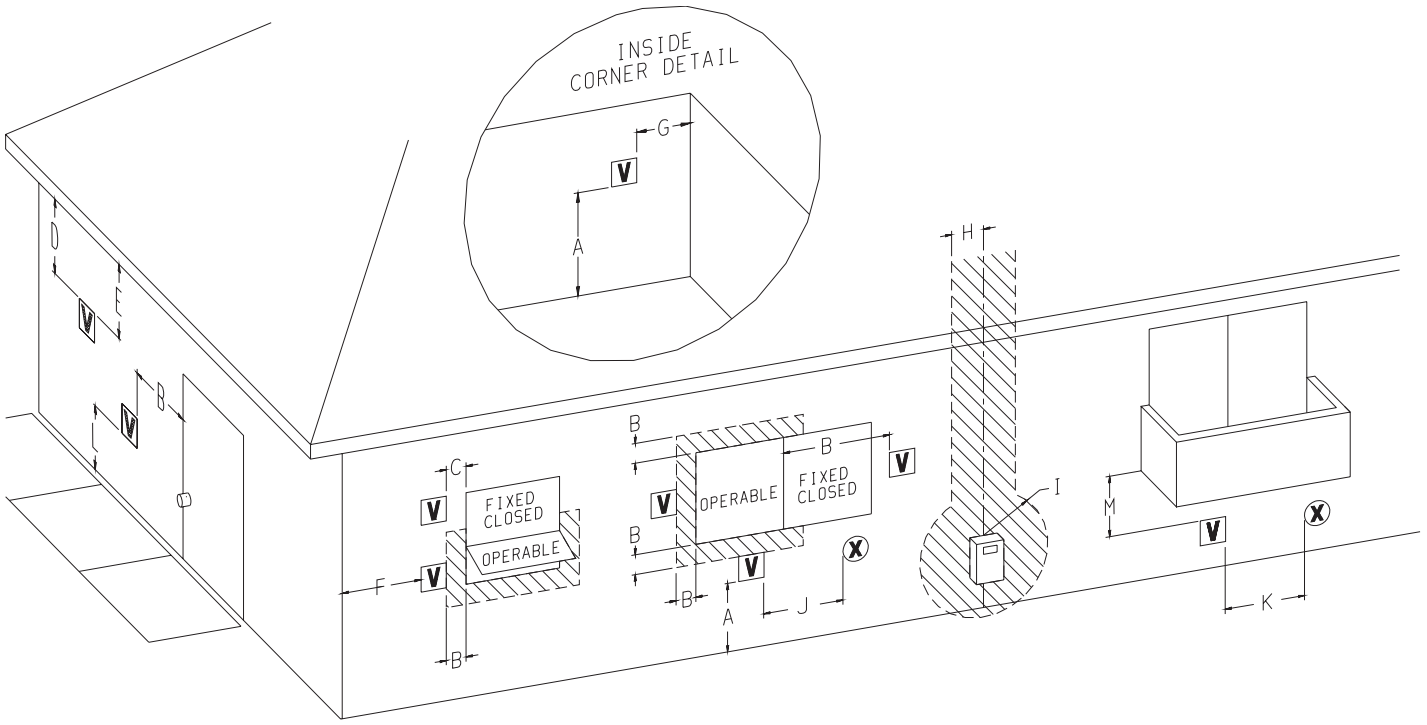
The graph showing the relationship between vertical and horizontal side wall venting will help to determine the various vent lengths allowable.

The horizontal vent run refers to the total length of vent pipe from the flue collar of the fireplace to the face of the outer wall.

The maximum horizontal vent run is 20 feet (457 cm) when the vertical vent rise is 8 feet (244 cm). **See** Figure **17.**

Venting terminals shall not be recessed into wall or siding.

VENT CLEARANCES



V VENT TERMINAL X AIR SUPPLY INLET AREA WHERE TERMINAL IS NOT PERMITTED

Figure **33**

A = *Clearance above grade, veranda, porch, deck or balcony [*12 inches (30cm) minimum]

B = clearance to window or door that may be opened [*12 inches (30cm) minimum for appliances < 100,000 Btuh (30kW)

C = clearance to permanently closed window [minimum 12 inches (30cm) recommended to prevent condensation on window]

D = vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 24 inches (60 cm) from the center of the terminal [18 Inches (46 cm) minimum

E = clearance to unventilated soffit [12 inches 30cm) minimum]

F = clearance to outside corner. **See** Page **32.**

G = clearance to inside corner. **See** Page **32.**

H = *not to be installed above a meter/regulator assembly within 3 feet (90cm) horizontally from the center-line of the regulator

I = clearance to service regulator vent outlet [*6 feet (1.8m) minimum]

J = clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other appliance [*12 inches (30cm) minimum for appliances ≤ 100,000 Btuh (30 kW)

36 inches (90cm) minimum for appliances > 100,000 Btuh (30kW)]

K = clearance to a mechanical air supply inlet [* 6 feet (1.8m) minimum]

L = †clearance above paved sidewalk or a paved driveway located on public property [*7 feet (2.1m) minimum]

M = clearance under veranda, porch, deck, or balcony [*12 inches (30cm) minimum]

† a vent shall not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings*

¥ only permitted if veranda, porch, deck, or balcony, is fully open on a minimum of 2 sides beneath the floor*

* as specified in CGA B149 Installations Codes or ANSI Z223.1. Note: Local Codes or Regulations may require different clearances.

VENT SYSTEM IDENTIFICATION

Installing Vent Components (Figure **34)**

Begin the vent system installation by installing the first Simpson Duravent component, 90° elbow to the starting collars or straight pipe on the top of the appliance, then the straight pipe length and then horizontal or vertical termination kit.

NOTE: All outer connection joints must be sealed with aluminum tape, screws or silicone sealant rated above 300°F/149°C. The inner flue joints do not require any sealant.

Simpson Duravent vent system components lock into place by sliding the concentric pipe section with four (4) equally spaced interior beads onto the appliance collar or previously installed component end with four (4) equally spaced indented sections. When the internal beads of each starting outer pipe line up, rotate pipe section clockwise 90° (approximately 3 inches). The vent pipe is now locked together.

Continue adding components per the pre-planned vent system configuration. Be certain that each succeeding vent component is securely fitted and locked into the preceding component in the vent system.

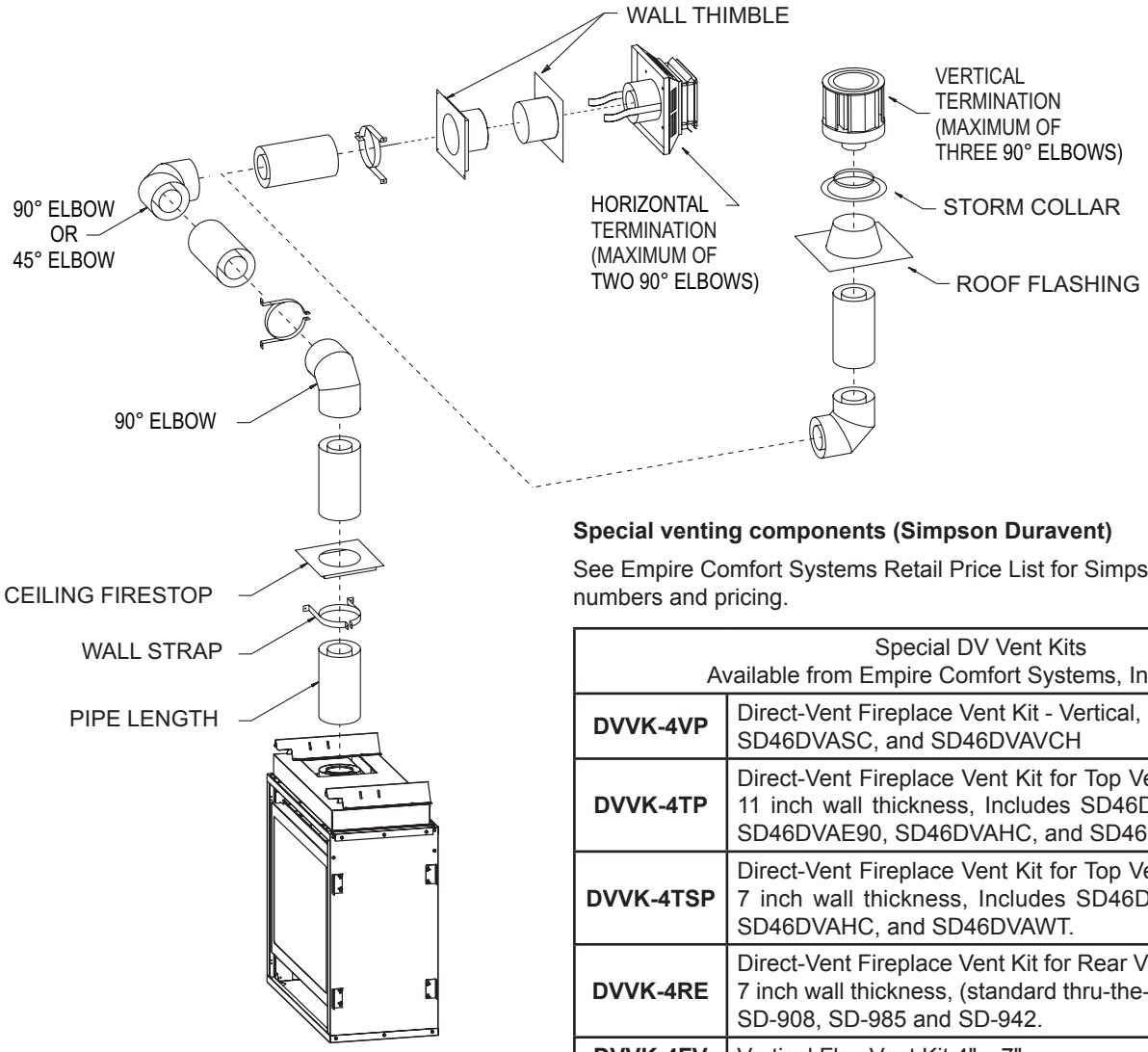


Figure **34**

Special venting components (Simpson Duravent)

See Empire Comfort Systems Retail Price List for Simpson Duravent part numbers and pricing.

Special DV Vent Kits Available from Empire Comfort Systems, Inc. dealers.	
DVVK-4VP	Direct-Vent Fireplace Vent Kit - Vertical, Includes SD46DVAF6, SD46DVASC, and SD46DVAVCH
DVVK-4TP	Direct-Vent Fireplace Vent Kit for Top Vent, Thru-the-wall, 8 to 11 inch wall thickness, Includes SD46DVA08A, SD46DVA09, SD46DVAE90, SD46DVAHC, and SD46DVAWT
DVVK-4TSP	Direct-Vent Fireplace Vent Kit for Top Vent, Thru-the-wall, 5 to 7 inch wall thickness, Includes SD46DVA06, SD46DVAE90, SD46DVAHC, and SD46DVAWT.
DVVK-4RE	Direct-Vent Fireplace Vent Kit for Rear Vent, Thru-the-wall, 5 to 7 inch wall thickness, (standard thru-the-wall venting). Includes SD-908, SD-985 and SD-942.
DVVK-4FV	Vertical Flex Vent Kit 4" x 7"
DVVK-4F	Vertical Flex Vent Kit 4" x 7"
DVEK-25	Direct-Vent Fireplace Flex Vent Extension Kit - Includes 25 ft. f 4 in. and 7 in. Flex Vent, couplings, and gear clamps. For use with DVVK-4FV
DVEK-10	Direct-Vent Fireplace Flex Vent Extension Kit: Includes 10 ft. of 4 in. and 7 in. Flex Vent, couplings, and gear clamp. For use with DVVK-4FV
VIB6A	Vertical Inlet Baffle Kit For 6 5/8" diameter

Installing Support Brackets (Figure **35)**

A horizontal pipe support MUST BE used for each 3 feet of horizontal run. The pipe supports should be placed around the pipe and nailed in place to framing members. There MUST BE a 3 inch clearance to combustibles above 6 5/8 inch diameter pipe and elbows and 1 inch clearance on both sides and bottom of 6 5/8 inch pipe to combustibles on all horizontal pipe sections and elbows.

Vertical runs of this vent systems must be supported every 4 feet above the appliance flue outlet by wall brackets attached to the 6 5/8 inch vent pipe and secured with nails or screws to structural framing members.

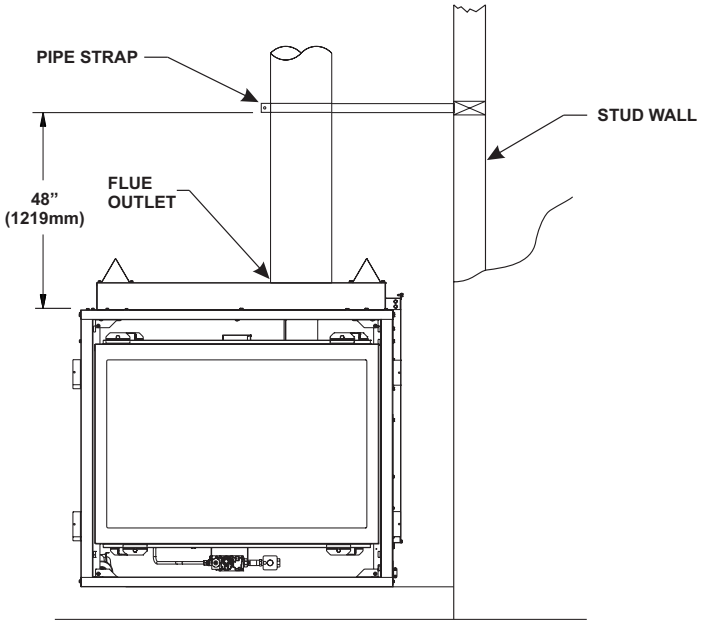


Figure **35**

Installing Firestops (Figure**s 36, 37, 38, and 39)**

Firestops are required for safety whenever the vent system passes through an interior wall, an exterior wall, or a ceiling. These firestops act as a firebreak heat shield and as a means to insure that minimum clearances are maintained to the vent system.

Horizontal runs in the vent system which pass through either interior or exterior walls, require the use of wall firestops on both sides of the wall through which the vent passes.

Position the firestops on both sides of the 10 inch x 11 inch hole, previously cut. Secure with nails or screws. The heat shields of the firestops MUST BE placed towards the top of the hole. Continue the vent run through the firestops. **See** Figure **36.**

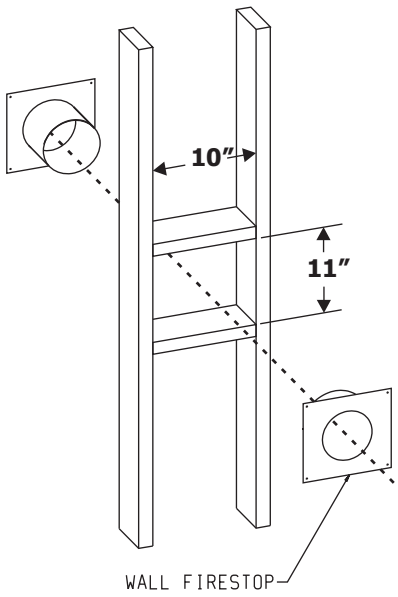


Figure **36**

Vertical runs of this system which pass through ceilings require the use of ONE (1) ceiling firestop at the hole in each ceiling through which the vent passes.

Position a plumb bob directly over the center of the vertical vent component and mark the ceiling to establish the center point of the vent. Drill a hole or drive a nail through this center point and check the floor above for any obstructions such as wiring or plumbing runs. Reposition the appliance and vent system, if necessary, to accommodate ceiling joists and/or obstructions.

Cut a 10 inch x 10 inch hole through the ceiling, using the center point previously marked. Frame the hole with framing lumber the same size as the ceiling joists. **See** Figure **37.** If the area above the ceiling is NOT an attic, position and secure the ceiling firestop on the ceiling side of the previously cut and framed hole. **See** Figure **38.** If the area above the ceiling is an attic, position and secure the firestop on top of the previously framed hole. **See** Figure **39.**

NOTE: Remove insulation from the framed area in the attic before installing the firestop and/or vent pipes.

FRAMING AND FINISHING (continued)

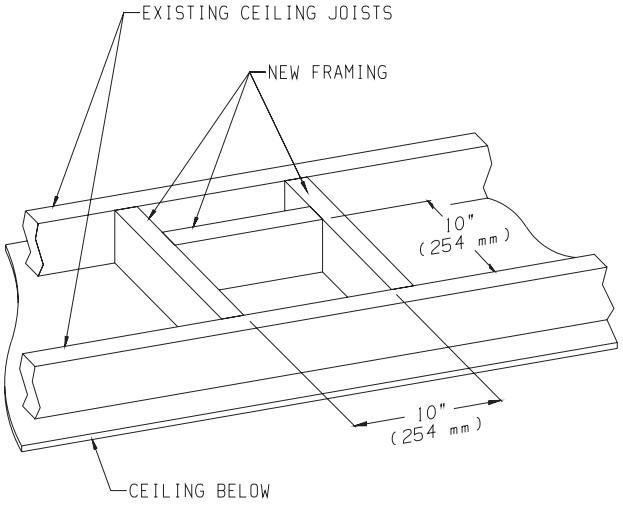


Figure **37**

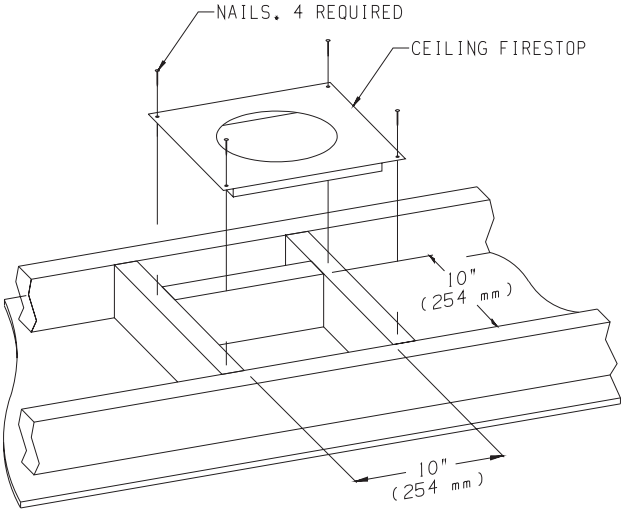


Figure **39**

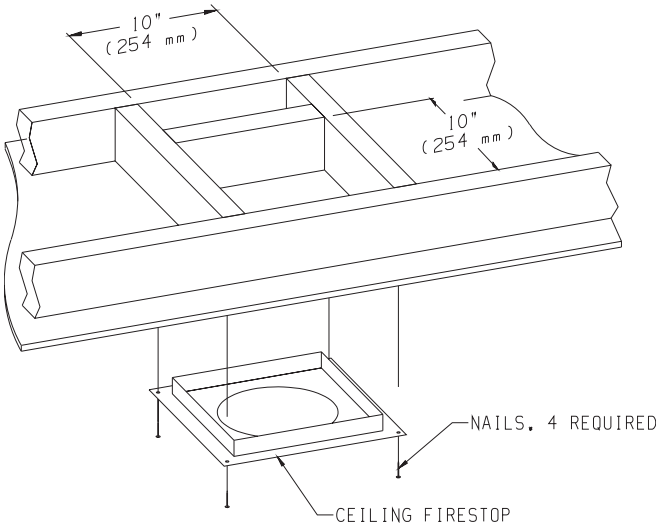


Figure **38**

HORIZONTAL TERMINATION

NOTE: Termination cap should pass through the wall firestop from the exterior of the building. Adjust the termination cap to its final exterior position on the building.

WARNING: Termination cap must be positioned so that arrow is pointing up.

Attach the termination cap with the four wood screws provided. Before attachment of the termination, run a bead of silicone sealant rated above 250°F on its outside edge too, so as to make a seal to the exterior wall.

NOTE: Wood screws can and should be replaced with appropriate fasteners for use on stucco, brick, concrete or other types of siding.

CAUTION: If exterior walls are finished with vinyl siding (or materials that could become discolored or warp), it is necessary to install a vinyl siding standoff.

The vinyl siding standoff will be installed between the vent termination and the exterior wall. **See** Figure **40.** This horizontal vent termination bolts onto the flat portion of the vinyl siding standoff, so an air space will exist between the wall and the termination cap.

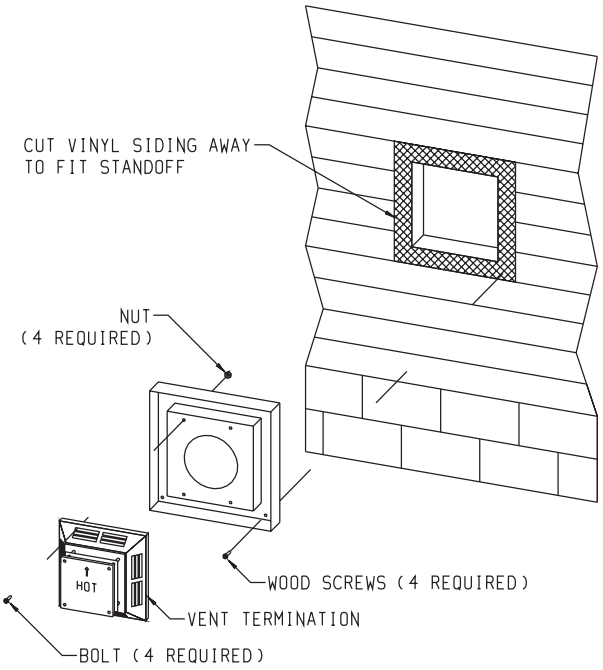


Figure **40**

For installations requiring a vertical rise on the exterior of the building, 14-inch and 36-inch tall Snorkel Terminations, as shown in Figure 41a are available. Follow the same installation procedures as used for standard Horizontal Terminations. If the Snorkel Termination must be installed below grade (i.e. basement applications, proper drainage must be provided to prevent water from entering the Snorkel Termination. **See** Figure **41b.** Do not attempt to enclose the Snorkel within the wall or any other type of enclosure.

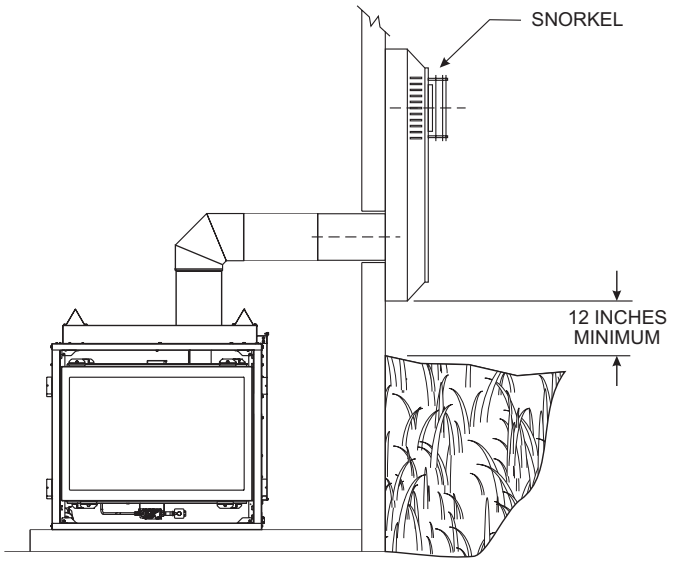


Figure **41a**

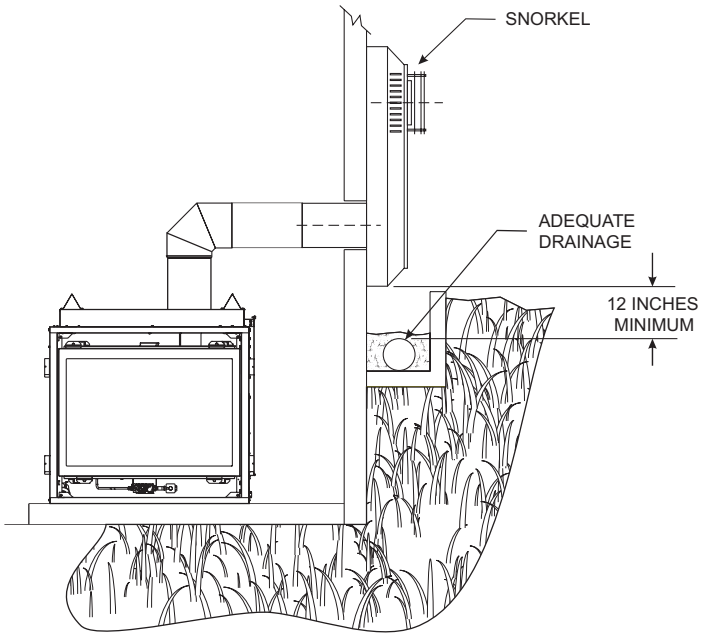


Figure **41b**

DVVK-4F FLEX VENT INSTRUCTIONS

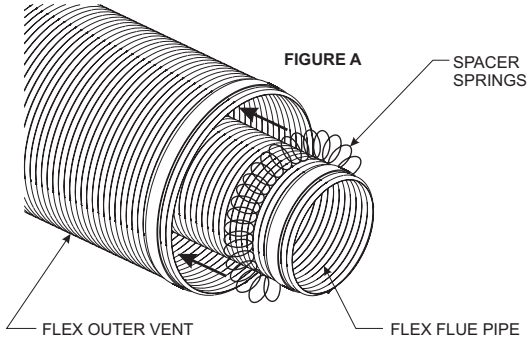
The **DVVK-4F FLEX VENT KIT** includes the following components:

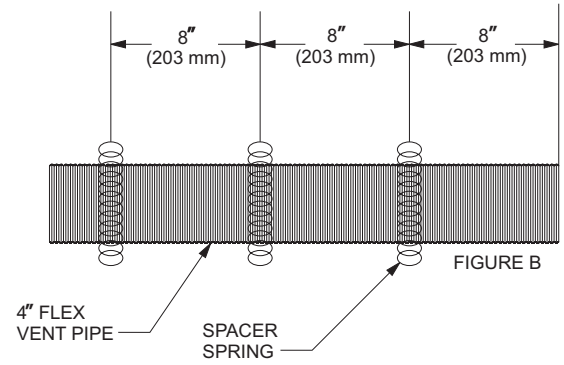
- (1) Horizontal Termination Cap
- (1) 4-foot section of Flex vent with spacers (4" flue/7" outer pipe)
- (1) 4" diameter Flue adapter collar
- (1) 7" diameter Outer Vent adapter collar
- (1) Wall Firestop/Thimble Assembly
- Hardware pack that includes band clamps and screws

Flex venting can be installed vertically off of the DLCX36SP Series fireplaces. When installing a horizontal vent run from top connections, maintain at least ½" rise for every 12" of vent run.
CAUTION: Always stretch and secure venting with wire or metal strapping to ensure that the horizontal runs do not sag.
If space permits, it is generally easier to attach venting in the top vent configuration.
Because of sharp edges, always use gloves when handling the flex vent components.
Vent connections should overlap a minimum of 1" for proper sealing.
Always follow the general venting requirements for vent terminal location, vent lengths, and clearance to combustible materials.

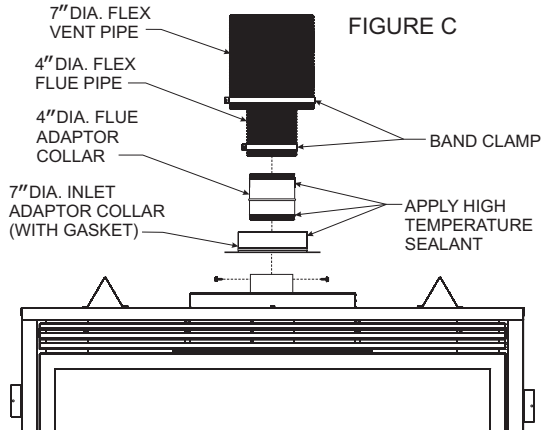
INSTALLATION

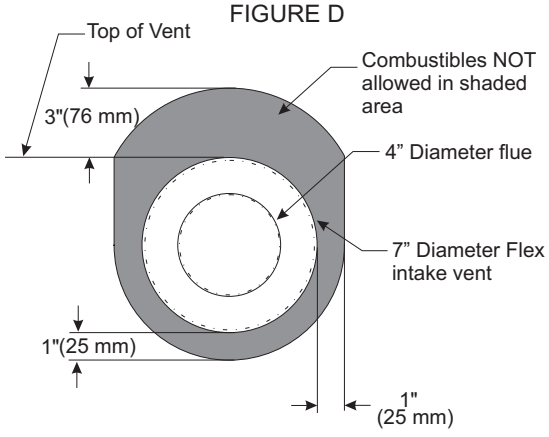
1. Unpack vent components and check that all items are included.
2. Check to see that the vent spacer springs are located around the flue vent at 8" and 12" intervals along its length. **See** Figure **A.** If not, stretch the spacer springs to about 15" long and wrap them around the flue, then interlock the ends of each spring about 2". **See** Figure **B.** Maintain equal distance between spring spacers.





3. Remove the 6-⅝" diameter inlet Vent collar from the fireplace. Replace this collar with the 7" diameter Flex Vent adapter collar provided with the vent kit.
4. Slide the Flex Vent flue pipe into the Outer Flex Vent pipe.
5. Install the Wall Firestop/Thimble assembly as required through the wall. Refer to the venting charts in the fireplace manual to determine the proper height and size of the vent opening. The minimum opening should be 9" wide by 11" high. The minimum combustible clearance from the horizontal vent is 1" from sides and bottom, and 3" above the vent pipe. **See** Figure **D.**
6. In most cases, after determining the length of the vent that is needed, it may be easier to install the flue and outer vent pipes to the Termination Cap first, then from the outside, feed the venting through the wall to the fireplace.
7. If the venting is to long, trim off any excess vent before attaching the vent end connectors.
8. Attach the Termination Cap to the outside of the house.
9. Prior to making the vent connections, apply high temperature sealant (1000 degree F min.) to the vent connections before securing with the band clamps provided. Note: the flue pipe end **without the adapter** is to be installed to the Termination Cap.
10. Apply sealant to the outside of the flue pipe adapter and connect to the flex flue pipe. Then insert the adapter into the fireplace flue. Secure flue adapter to the fireplace flue with a minimum of two screws provided. **See** Figure **C.**
11. Attach the Outer Vent pipe to the 7" diameter Collar on the fireplace with a large band clamp provided. Sealant may also be used on the outer vent connections.
12. Check all vent connections for tightness. Make sure horizontal venting has the proper rise and combustible clearances required. Refer to venting charts in fireplace instruction manual.





VERTICAL TERMINATION

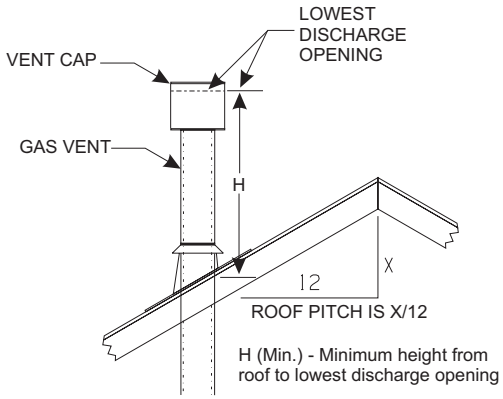
Locate and mark the center point of the venting pipe. Using a nail on the underside of the roof and drive this nail through this center point. Make the outline of the roof hole around this center point.

NOTE: Size of the roof hole dimensions depend on the pitch of the roof. There must be a 1 inch clearance (25mm) to the vertical pipe sections. This clearance is to all combustible material.

Cover the opening of the vent pipe and cut and frame the roof hole. Use framing lumber the same size as the roof rafters and install the frame securely. Flashing anchored to frame must withstand high winds. The storm collar is placed over this joint to make a water-tight seal. Non-hardening sealant should be used to completely seal this flashing installation.

Determining Minimum Vent Height Above the Roof.

WARNING: Major U.S. building codes specify minimum chimney and/or vent height above the roof top. These minimum heights are necessary in the interest of safety. These specifications are summarized in Figures **42 and 43.**



ROOF PITCH	H (Min.)
Flat to 6/12	12" (305 mm)
6/12 to 7/12	15" (381 mm)
Over 7/12 to 8/12	18" (457 mm)
Over 8/12 to 16/12	24" (610 mm)
Over 16/12 to 21/12	36" (914 mm)

Figure **42**

Note that for steep roof pitches, the vent height must be increased. In high wind conditions, nearby trees, adjoining roof lines, steep pitched roofs, and other similar factors can result in poor draft, or down-drafting. In these cases, increasing the vent height may solve this problem.

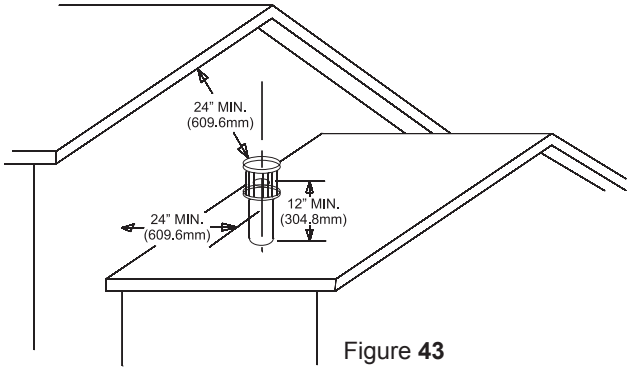


Figure **43**

When terminating the vent cap near an exterior wall or overhang, maintain minimum clearances as shown in Figure **43**.

General Maintenance

Conduct an inspection of the venting system semi-annually. Recommended areas to inspect are as follows:

1. Check areas of the venting system which are exposed to the elements for corrosion. These will appear as rust spots or streaks and, in extreme cases, holes. These components should immediately be replaced.
2. Remove the cap and shine a flashlight down the vent. Remove any bird nests or other foreign material.
3. Check for evidence of excessive condensate, such as water droplets forming in the inner liner and subsequently dripping out at joints. Condensate can cause corrosion of caps, pipe and fittings. It may be caused by having excessive lateral runs, too many elbows and exterior portions of the system being exposed to cold weather.
4. Inspect joints to verify that no pipe sections or fittings have been disturbed and, consequently, loosened. Also, check mechanical supports, such as wall straps or plumbers' tape for rigidity.

Venting terminal shall not be recessed into a wall or siding.

A removable panel or other means must be provided in the enclosure for visual inspection of the flue connection.

NOTE: This also pertains to vertical vent systems installed on the outside of the building.

Slide the vertical vent cap over the ends of the vent pipe and secure. **See** Figure **44.**

Installing the Vent System in a Chase

A chase is a vertical box-like structure built to enclose the gas appliance and/or it's vent system. Vertical vent runs on the outside of a building may be, but are not required to be installed inside a chase.

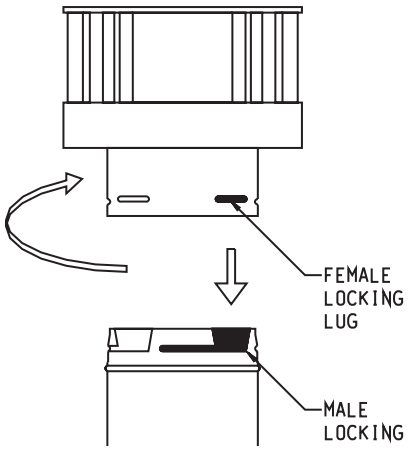


Figure **44**

CAUTION: Treatment of firestop spacers and construction of the chase may vary with the type of building. These instructions are not substitutes for the requirements of local building codes. Therefore, your local building codes must be checked to determine the requirements for these steps.

VERTICAL TERMINATION (continued)

NOTE: When installing this vent system in a chase, it is always good building practice to insulate the chase as you would the outside walls of your home. This is especially important for cold climate installations. Upon completion of building your chase framing, install the vent system by following the instructions in this manual. Remember to build the chase large enough so that minimum clearance of combustible materials (including insulation) to the vent system are maintained.

Installation of Vertical Inlet Baffle

The vertical inlet baffle is to be used only in a completely vertical vent installation. The vertical inlet baffle can be used when the vertical vent rise is between 10 feet and 40 feet. To maintain the yellow flame in the main burner, purchase Vertical Inlet baffle, VIB6A for use with 6 5/8" diameter vent systems. These are available from your Empire Comfort Systems, Inc. distributor or dealer.

In a vertical vent rise the rear (yellow) flame on the main burner can be reduced due to the drawing action from the flue exhaust pipe and the air inlet pipe. A decrease in the height or the appearance of the yellow flame may occur when the vertical vent rise is between 10 feet and 40 feet. To enhance the yellow flame on the main burner, the vertical inlet baffle can be attached to the direct vent high wind vertical top.

Please refer to the instructions included with the Air Inlet Baffle Kit for proper installation.

Reassembly and Resealing Vent Pipe System

Attach vent pipe to inlet and outlet vent adaptor on fireplace in either the vertical or horizontal position, replace horizontal and vertical pipe lengths, elbows and horizontal or vertical termination kit.

All rigid pipe vent system components lock into place by sliding the concentric pipe section with four (4) equally spaced interior beads onto the appliance collar or previously installed component end with four (4) equally spaced indented sections. When the internal beads of each starting outer pipe line up, rotate pipe section clockwise 90° (approximately 3 inches). The vent pipe is now locked together.

Continue replacing components per the vent system configuration. Be certain that each succeeding vent component is securely fitted and locked into the preceding component in the vent system.

Vertical Through the Roof Applications (Figure **45)**

Your Gas Fireplace has been approved for:

a) Vertical installations up to 40 feet in height.
b) Two sets of 45 degree elbow offsets within these vertical installations. From 0 to a maximum of 8 ft. a vent pipe can be used between elbows.
c) Wall straps must be used to support offset pipe every 4'.

This application will require that you first determine the roof pitch and use the appropriate venting components.

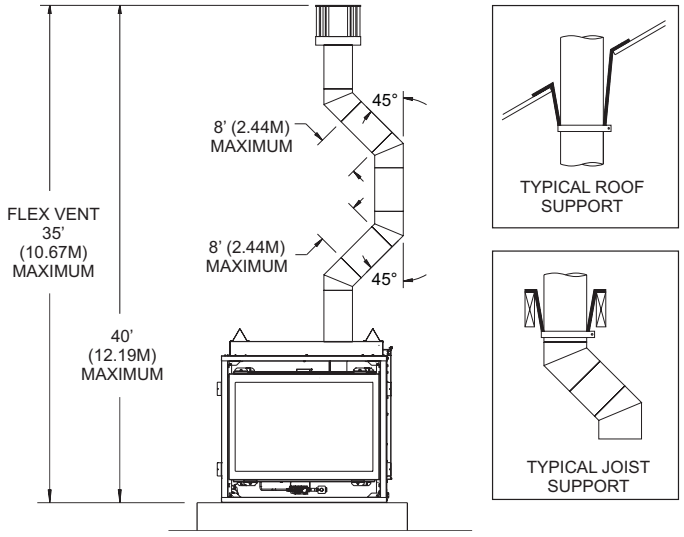


Figure **45**

OPERATING INSTRUCTIONS/FLAME APPEARANCE

After 10 to 15 minutes of normal operation at full rate, the flame appearance should have random yellow flames. Natural gas burners will tend to have blue flames with yellow flame tips.

NOTE: All flames will be random by design, flame height will go up and down.

During manufacturing, some components of this appliance are treated with certain oils, films or bonding agents. These chemicals are not harmful, but may produce annoying smoke and smells as they cure or burn off during the initial operation of the appliance, possibly causing headaches, eye, or lung irritation. This is a normal and temporary occurrence.

The initial break-in operation should be 5 to 10 minutes on (at the highest setting) then let cool for 10 to 15 minutes. Repeat this On/Off cycle two to three times to cure sealants. Provide additional ventilation by opening windows or doors to allow odors to dissipate. Any odors remaining after this initial break-in will be slight and will disappear with continued use.

PERIODIC CLEANING – Refer to parts diagram for location of items discussed below.

- Do not use cleaning fluid to clean logs or any part of heater.
- Remove loose particles and dust from the burner areas, controls and liners.
- Inspect and clean burner air intake (air shutter opening). Remove lint or particles with brush. Failure to keep air intake hole clean will result in sooting and poor combustion.

ANNUAL CLEANING/INSPECTION – Refer to parts diagram for location of items discussed below.

- Inspect and clean burner air intake hole. Remove lint or particles with vacuum or brush. Failure to keep air intake hole clean will result in sooting and poor combustion.
- Inspect and clean all burner ports.
- Inspect pilot for proper operation.
- Verify flame pattern for proper operation.
- Verify smooth and responsive ignition of main burner.

RF OPERATING INSTRUCTIONS

RF VALVE OPERATION (AF-4040 Electronic Gas Valve system only)

Please refer to the separate instructions for detailed operation and programming of the Multi-function Remote Control.

The AF-4040 Electronic Gas Control Valve features a Remote controlled High/Low Variable - 6 Volt DC Motor Drive. This gas control uses a spark to pilot burner assembly. For use with Propane or natural gas (pre-set at the factory).

This gas control system includes the items identified in Figure 46.

SPECIAL FEATURES ON THE CONTROL MODULE

The Control Module has two special pilot mode features built into the system.

CONTINUOUS PILOT FEATURE: This allows the user to change from a spark to pilot system to a standing pilot system.

1. There is a switch located on the right side of the Control Module (#4) that reads CONTINUOUS PILOT ON/OFF. This switch will allow the user to select the pilot mode of operation.
2. When the continuous pilot switch is in the OFF position and the appliance turned ON, the pilot will spark and light, then the main burner will light as well. When the appliance is turned OFF, the pilot and main burner will shut OFF.
3. When the continuous pilot switch is in the ON position and the appliance is turned ON, the pilot will spark and light. Then when the appliance is turned OFF the pilot will remain ON, but the main burner will shut OFF.
   NOTICE: The Continuous pilot mode setting is generally recommended on Direct Vent appliances during cold climate seasons to help keep the firebox and flue warm which will help induce proper draft on initial start ups..

REMOTE CONTROL FEATURE: The Control Module has a built in remote control receiver which allows the user to program the hand held remote transmitter.

1. There is a switch located on the right side of the Control Module that reads REMOTE/OFF.
2. When the remote/off switch is in the OFF position the appliance will operate from an appliance mounted rocker switch (#3) or optional wall switch connected to the two (2) BROWN wires on the Control Module.
3. When the remote/off switch is in the REMOTE position the appliance will operate from the Remote Control transmitter.

The Control Module must be programmed to the Remote Control.

1. To program, located the learn button on the left side of the Control Module. Press and release the learn button. There will be a beep sound from the Control Module, then press any key on the remote transmitter. Once the internal receiver accepts the transmitter code there will be a series of confirming beeps.
2. To switch between the NG and LP step motor settings, press and hold the learn button for 20 seconds. The module should emit a short beep (less than 1 second) to indicate that the control was switched from NG (default setting) to LP. When switching back from LP to NG, the control should emit a long beep (3 seconds).

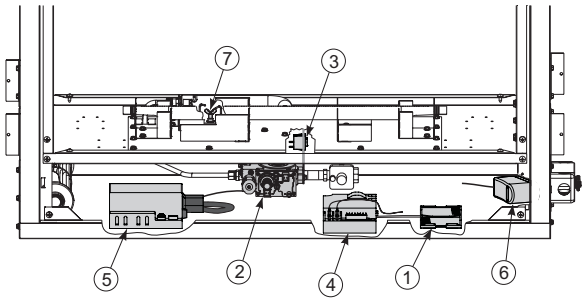
POWER SUPPLY SYSTEM

The Gas Control system is powered by a standard 110 volt AC through a 6.0 volt DC adaptor. The AC adaptor is connected to the Control Module with two 1/4” female terminals.

This control system also includes a Battery Back-up pack that allows the Gas Control system only to operate in the event of a power outage.

NOTICE**:** The Accent Light and/or Blower features will not operate during a power outage.

NOTICE**:** All Batteries should be replaced at least once each year, preferably at the beginning of the heating season.



Index No.	Part No.	Description
1	R10418	Battery Back-up
2	R10415	AF Valve, RF
3	R2522	Off/On Switch
4	R11007	AF Control Module
5	R10416	AF Extension Module
6	R10419	AC Adapter
7	R10423	Pilot Assembly - Nat
	R10424	Pilot Assembly - LP
Not Shown	R11006	Remote Control

Figure **46**

RF MAINTENANCE INSTRUCTIONS

MAINTENANCE

Maintenance frequency must be determined individually for each application. Some considerations are:

- Exposure to water, dirt, chemicals and heat can damage the gas control and shut down the control system.
- Cycling frequency. Appliances that may cycle 20,000 times annually should be checked monthly.
- Intermittent use. Appliances that are used seasonally should be checked before shutdown and again before the next use.
- Dusty, wet or corrosive environment. Because these environments can cause the gas control to deteriorate more rapidly, the system should be checked more often.
- Any control should be replaced if it does not perform properly on checkout or service. In addition, replace any module if it is wet or looks like it has been wet.

⚠ WARNING

Fire or explosion hazard. Can cause property damage, sever injury or death.

Do not attempt to take apart the gas control or to clean it. Improper assembly and cleaning can cause unreliable operation.

SERVICE

Do not disassemble the gas control; it contains non-replaceable components. Attempted disassembly or repair can damage the control.

Exactly follow the warnings and the lighting instructions.

1. Before lighting, smell around the appliance area for gas. If the appliance uses LP (bottled) gas, be sure to smell next to the floor because LP gas is heavier than air. If you smell gas, immediately shut off the manual valve in the gas piping to the appliance or on LP at the tank. Do not try to light any appliance. Do not touch any electrical switch or use the phone. Leave the building and call your gas supplier. If your gas supplier cannot be reached, call the fire department.
2. The gas control must be replaced if it has been flooded with water. Call a qualified service technician.
3. The gas control is a safety device. It must be replaced in case of any physical damage such as bent terminals, missing parts, stripped threads, or evidence of exposure to excessive heat.

Follow the operating instructions provided by the manufacturer of your heating appliance.

TROUBLESHOOTING

IMPORTANT: All service and trouble-shooting procedures should be performed by an experienced qualified service technician.

If the pilot will not stay lit:

1. Confirm that the “S” wire and the “I” wire are properly connected to the Control Module “S” and “I” terminals.
2. Confirm that the Spark to Pilot burner is properly grounded to the Gas Control Valve and the Control Module.
3. Check the power source from the 6-volt power adaptor or the Battery Back-up pack connection and condition of batteries.
4. Check the position of the CONTINUOUS PILOT switch on the Control Module. If main burner does not come ON when the manual switch and remote control is turned ON:
   a. Confirm that the pilot sparks and lights.
   b. Check the two (2) pin plastic connectors that plug into the face of the Gas Control valve.
   c. Confirm that the Gas Control valve is properly grounded to the Control Module.

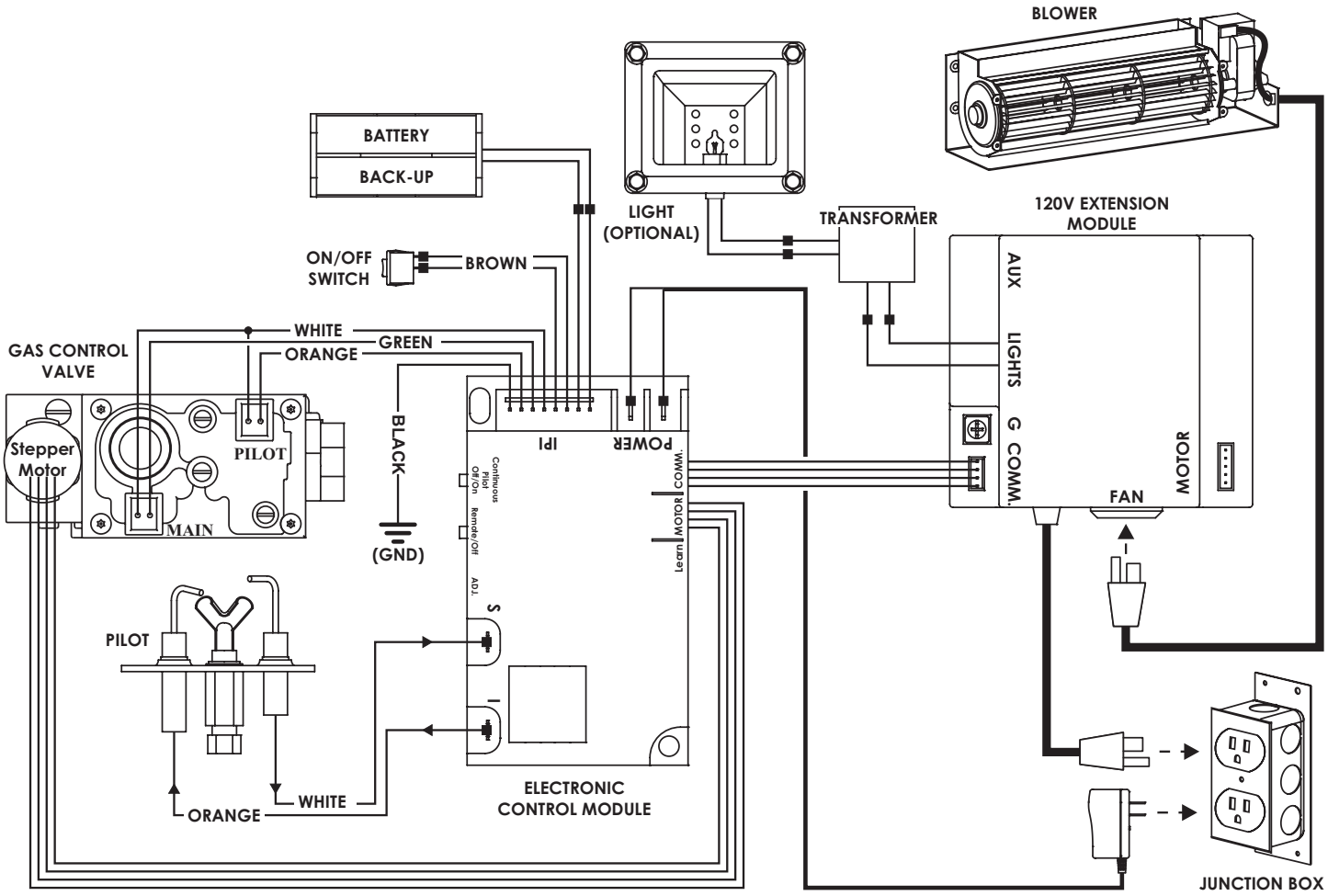
OPTIONAL GAS CONVERSION KITS

Please contact your dealer or distributor for the proper Conversion kit for these fireplace models. Conversion kits will include complete instructions, minimum rate screw, plus the pilot and main burner orifice for the gas type required. The AF-4040 Electronic Gas Control Valve is convertible to use either natural or propane gas by simply turning a small Rotary knob located at the front of the gas valve. This rotary knob is located under a small rubber cap and should only be adjusted when converting gas type.

⚠ WARNING

The gas type has been pre-set at the factory and must not be changed unless a complete conversion is made which includes changing of the gas pilot injector, minimum rate screw and main burner orifice.

RF WIRING DIAGRAM



NOTICE: For "RF" Fireplace models with Premium Multi-Function Remote Control, Refer to the separate instructions for operation of the remote control system.

Figure **47**

RF STANDING PILOT LIGHTING INSTRUCTIONS

FOR YOUR SAFETY READ BEFORE LIGHTING

⚠ WARNING: IF YOU DO NOT FOLLOW THESE INSTRUCTIONS EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY, OR LOSS OF LIFE.

A. This appliance has a pilot which must be lighted with the remote control. When lighting the pilot, follow these instructions exactly.

B. BEFORE LIGHTING, smell around the appliance area for gas. Be sure to smell next to the floor because some gas in heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS

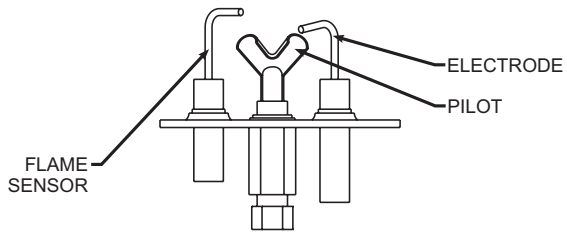
- **Do not try to light any appliance.**
- **Do not touch any electrical switch.**
- **Do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions. If you can not reach your gas supplier, call the fire department.**

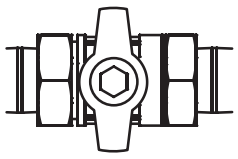
C. Use only the remote control to operate the gas control knob. Never use tools. If valve does not operate, don't try to repair it, call a qualified service technician. Force or attemtped repair may result in a fire or explosion.

D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

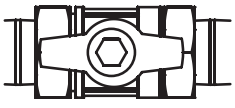
LIGHTING INSTRUCTIONS

1. **STOP! Read the safety information above.**
2. **Turn OFF electric power to the appliance.**
3. **Open bottom louver assembly.**
4. **Turn gas cock counterclockwise ↶ to "ON" position.**
5. **Wait ten (10) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you do not smell gas, go to the next step.**
6. **Turn ON electric power to the appliance.**
7. **Find pilot - Follow metal tube from gas control. The pilot is behind the burner on the right side.**
8. **Using the remote control, turn main flame to "ON." If the pilot does not light within 60 seconds, stop and go to Step 5.**
9. **Refer to remote control instructions for detailed information, control features, and operation. Note: There is a switch on the side of the Electronic Control Module that allows for a continuous standing pilot mode or an intermittent pilot mode. See appliance manual for location of this switch. If the pilot or burner does not stay lit (in the standing pilot mode), stop and immediately call a qualified service technician or gas supplier.**
10. **If the burner or pilot does not operate properly after several tries, turn the gas control knob clockwise ↷ to "OFF" and call your service technician or gas supplier.**
11. **Close bottom louver assembly.**
12. **Operation of the gas valve, blower, and/or optional light must be controlled by using the hand held remote control. Refer to remote instructions for detailed operation information.**





OFF



ON

TO TURN OFF GAS TO APPLIANCE

1. **Turn off all electric power to the appliance if service is to be performed (if applicable).**
2. **Open bottom louver assembly.**
3. **Locate On/Off gas cock and turn clockwise to "OFF." Do not force. ↷**
4. **Close bottom louver assembly.**

MAINTENANCE AND SERVICE

PLEASE NOTE
It is normal for appliances fabricated of steel to give off some expansion and/or contraction noise during the start up or cool down cycle. Similar noises are found with your furnace heat exchanger or car engine.

It is not unusual for your gas fireplace to give off some odor the first time it is burned. This is due to the curing of the paint and any undetected oil from the manufacturing process.

Please ensure that your room is well ventilated - open all windows.

IMPORTANT: Turn off gas before servicing appliance. It is recommended that a qualified service person perform these check-ups at the beginning of each heating season.

- **Clean Burner and Control Compartment**
  Keep the control compartment and burner areas clean by vacuuming or brushing at least twice a year.

  Cleaning Procedure
  1. Turn off pilot light.
  2. Remove glass front. (See Glass Removal)
  3. Vacuum burner compartment.
  4. Reinstall glass front.
  5. Ignite pilot. (See Lighting Instructions)
  6. Operate the pilot burner. If it appears abnormal, call a service person.

- **Check Vent System**
  The appliance and venting system should be inspected before initial use and at least annually by a qualified service person. Inspect the external vent cap on a regular basis to make sure that no debris is interfering with the air flow.

Glass Cleaning
It will be necessary to clean the glass periodically. During start-up condensation, which is normal, forms on the inside of the glass and causes lint, dust and other airborne particles to cling to the glass surface. Also initial paint curing may deposit a slight film on the glass. It is therefore recommended that the glass be cleaned two or three times with a non-abrasive household cleaner and warm water (we recommend gas fireplace glass cleaner). After that the glass should be cleaned two or three times during each heating season depending on the circumstances present.

General Glass Information

WARNING: Do not operate appliance with the glass front removed, cracked or broken. Replacement of the glass should be done by a licensed or qualified service person.

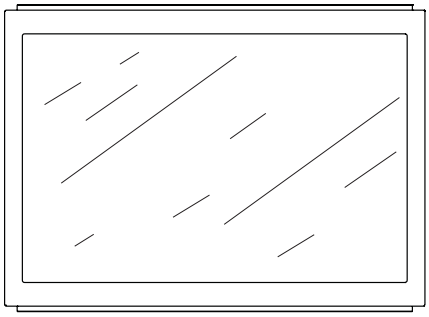
Only glass approved for use by the manufacturer in fireplace may be used for replacement. The glass replacement should be done by a licensed or qualified service person.

WARNING:
1. The use of substitute glass will void all product warranties.
2. Care must be taken to avoid breakage of the glass.
3. Under no circumstances should this appliance be operated without the glass front or with a broken glass front. Replacement of the glass (with gasket) as supplied by the manufacturer should be done by a qualified service person.
4. Do not abuse the glass by striking or hitting the glass.

WARNING: Do not use abrasive cleaners on glass. Do not attempt to clean glass when glass is hot.

Glass Removal
1. Remove Surround Panel Face Assembly.
2. Release two glass frame clamps at bottom of the firebox.
3. Release two glass frame clamps at top of firebox.
4. Remove glass frame(s) by pulling straight forward.

Glass Assembly Replacement
5. Place glass frame onto firebox.
6. Attach two glass frame clamps at top of firebox.
7. Attach two glass frame clamps at the bottom of the firebox.
8. Reinstall Surround Panel Face Assembly.



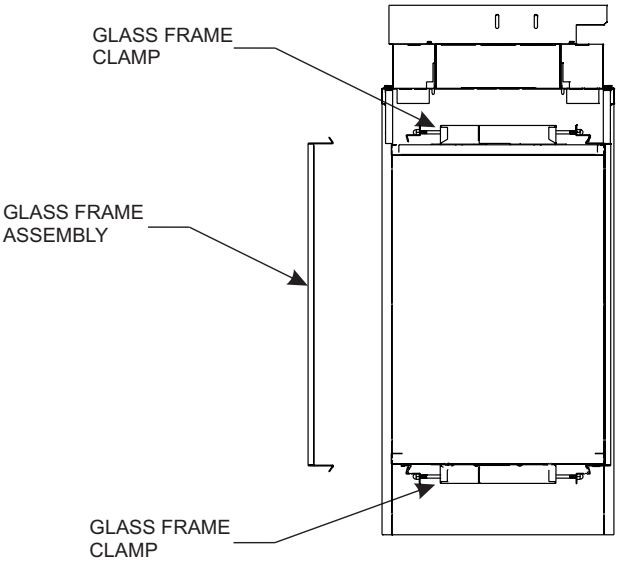


Figure **48**

Reassembly and Resealing Gas Accumulation Relief System Glass Frame Assembly and Combustion Chamber
Whenever the glass frame assembly is pivoted to open by a delayed ignition in the main burner, the glass frame assembly gaskets and combustion chamber must be examined by a qualified service person for damage. All damaged gaskets on the glass frame assembly and combustion chamber must be replaced by a qualified service person. If damage occurs to the combustion chamber, it must be replaced by a qualified service person.

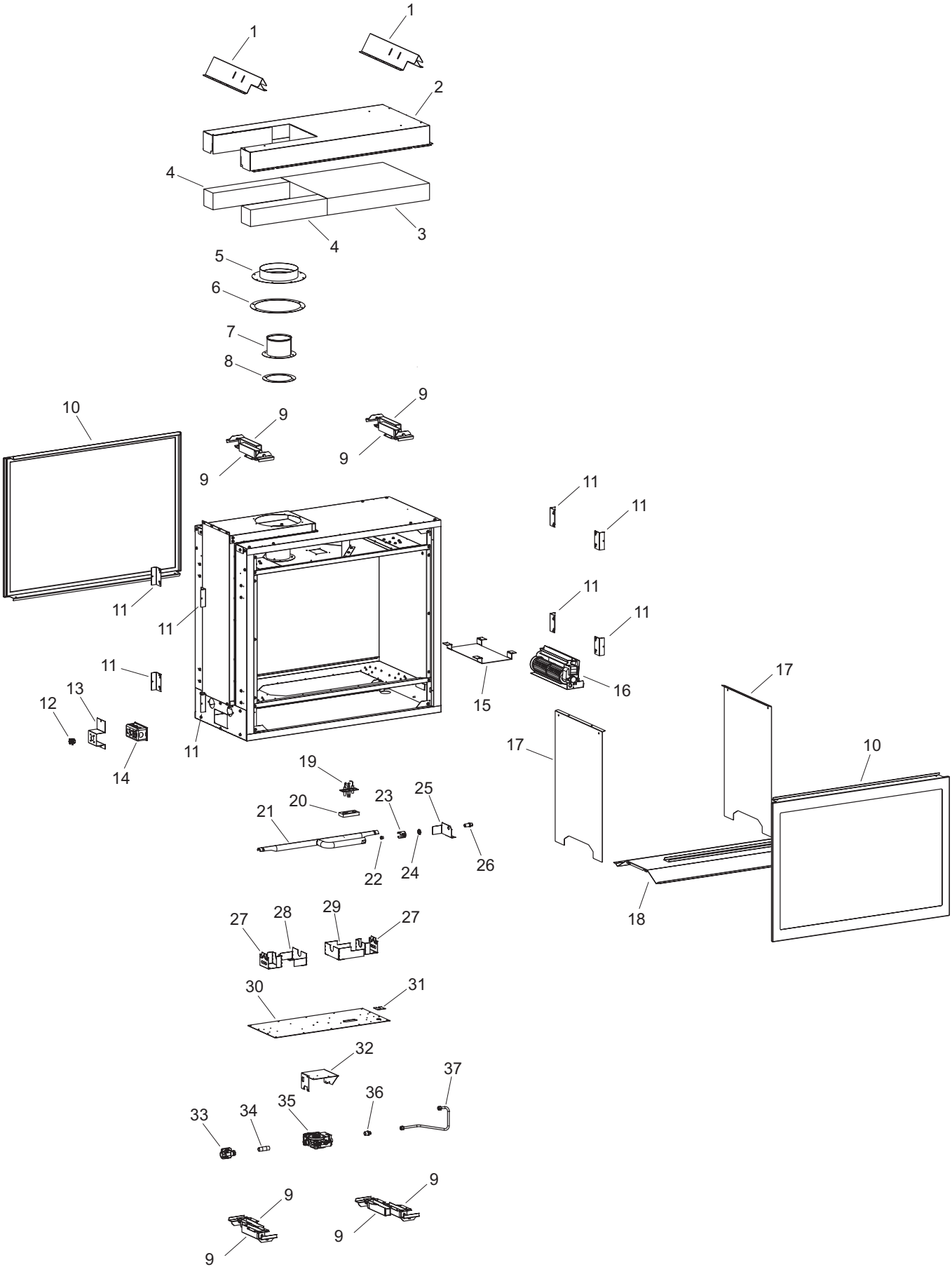
PARTS LIST

INDEX NO.	PART NO.	DESCRIPTION
COMMON PARTS		
1	17149	TOP STANDOFF
2	28341	TOP COVER
3	R11053	INSULATION, TOP WIDE
4	R11052	INSULATION, TOP NARROW
5	R7566	INLET VENT ADAPTOR
6	R7573	INLET VENT GASKET
7	17155	FLUE OUTLET ASSEMBLY
8	M163	GASKET, FLUE CONNECTOR
9	29057	SPRING RETAINER ASSEMBLY
10	28990	GLASS DOOR FRAME ASSEMBLY
11	28688	NAILING FLANGE
12	R7571	3/8" ROMEX CONNECTOR
13	27730	JUNCTION BOX MOUNTING BRACKET
14	R3490	JUNCTION BOX
15	28951	BAFFLE, FLUE
16	26383	BLOWER ASSY (RF FBB5-1)
17	28947	LINER SIDE, PORCELAIN
18	28948	BURNER COVER
20	R9189	GASKET, PILOT
21	R11027	TUBE BURNER
23	R7624	AIR SHUTTER
24	R7575	JAMB NUT
25	28332	BURNER SUPPPORT, AIR SHUTTER END
26	P212	FITTING, ORIFICE
27	28331	BURNER SUPPORT
28	28328	BAFFLE, BURNER - MEDIUM
29	28327	BAFFLE, BURNER - LARGE
30	28329	BURNER BASE

INDEX NO.	PART NO.	DESCRIPTION
31	11269	GAS LINE BRACKET
32	26307	VALVE BRACKET
34	P239	NIPPLE, 1 1/2"
35	R10415	VALVE, LP & NAT (AMERICAN FLAME)
36	R2423	CONNECTOR, MALE 5/16 X 3/8 NPT
37	28950	TUBING ASSEMBLY, INLET
N/S	R7591	FLEXLINE W/SHUTOFF VALVE
N/S*	R10416	EXTENSION MODULE
N/S*	R11007	CONTROL MODULE
N/S*	R2522	SWITCH, ON/OFF
N/S*	R10418	BATTERY BACKUP
N/S*	R10419	AC ADAPTER
N/S*	R11006	REMOTE CONTROL, AF MULTI-FUNCTION
DLCX36SP93N-1		
19a	R10423	PILOT ASSEMBLY, NAT
22a	P305	ORIFICE (NAT. GAS) 2.75mm
33a	R11044	REGULATOR, MAXITROL 5.3" W.C.(NAT).
N/S	R10430	MINIMUM RATE SCREW - # 37
DLCX36SP93P-1		
19b	R10424	PILOT ASSEMBLY, LPG
22b	P250	ORIFICE (LP GAS) 1.65 mm
33b	R11045	REGULATOR, MAXITROL 11.7" W.C.(LPG).
N/S	R10428	MINIMUM RATE SCREW - # 52

N/S*: Not Shown on Parts View. See page 39 for location and identification of parts.

PARTS VIEW


1
1
1
2
4
4
3
5
6
7
8
9
9
9
9
10
11
11
11
11
11
11
11
11
12
13
14
15
16
17
17
10
18
19
20
21
22
23
24
25
26
27
28
29
27
30
31
32
33
34
35
36
37
9
9
9
9

ACCENT LAMP

Your Direct Vent Gas Fireplace comes equipped with an "Accent Lamp." The light has been pre-wired and is controlled from the Remote Control.

If in the event the lamp or lens needs to be replaced, follow the instructions below:

1. Unplug the Accent Lamp/transformer from the junction box inside the fireplace.
2. Remove the four screws that secure the lens frame. This frame retains the glass lens. The bulb can now be accessed.

Note: Do not handle the lamp (bulb) with bare fingers, protect with clean dry cloth.

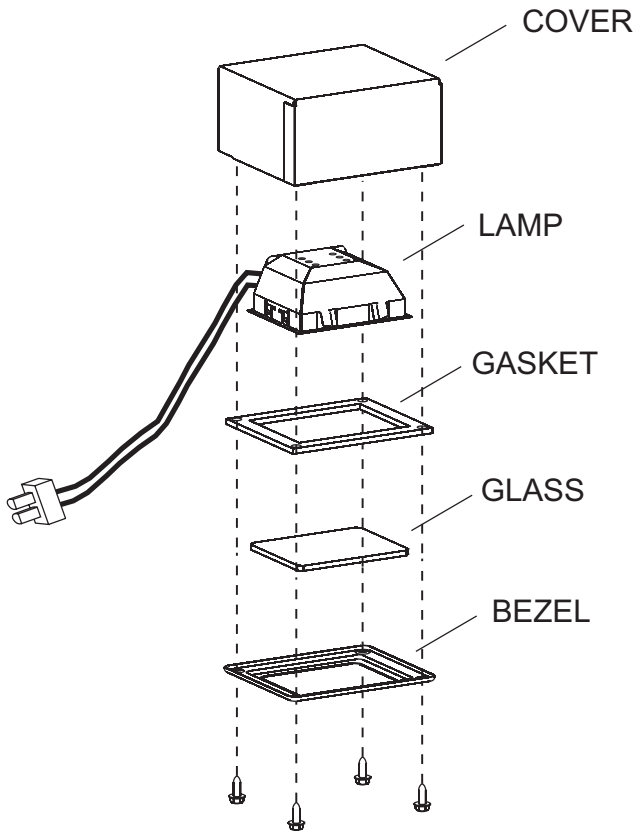
The lamp will pull straight out of the socket. Replace with 10 Watt/12 Volt Halogen bulb.

When re-installing, ensure integrity of gasket seal.

THE FIREBOX MUST BE SEALED.

Over-tightening the screws could break the lens.

"Light Leakage" from the upper area may be observed. The holes in the lamp housing are necessary for ventilation and must not be covered.



Part Number	Description
23116	Cover
R11117	Lamp
R9658	Gasket
R9341	Glass
R9342	Bezel

Figure **49 - Accent Lamp Parts**

OPTIONAL DECORATIVE GLASS PLACEMENT

⚠ WARNING

Failure to position the parts in accordance with the diagrams and instructions below or failure to use only parts specifically approved for use with this heater may result in property damage or personal injury.

NOTE: The DLCX36SP Fireplace may be operated with or without the Decorative glass accessory options. Follow the directions below should you choose to enhance your Loft Fireplace with any one of the available decorative glass options.

DECORATIVE GLASS ACCESSORY PLACEMENT

The Decorative Glass options are available in various colors. Choose the proper size kit for use with your particular Loft Fireplace. See Page 48.

CAUTION: Use of gloves and eye protection is required while applying the decorative glass.

INSTALLATION

1. Application of the Decorative Glass should only be performed after the Fireplace has been fully installed, secured and tested for leaks. If operating the burner with a Remote Control, make sure all batteries are installed and that the burner operates with the remote correctly.

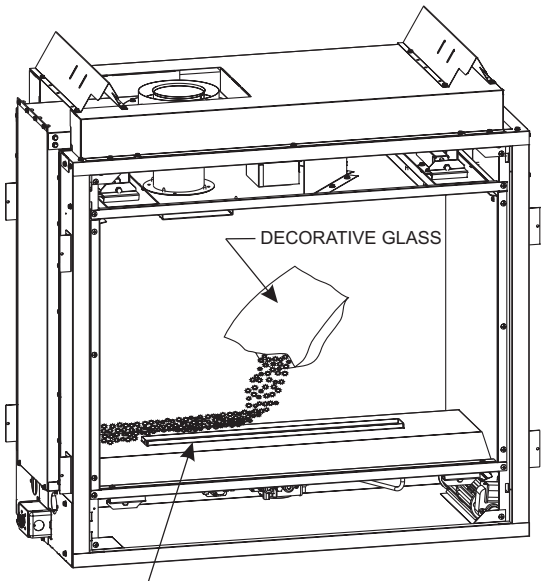

DECORATIVE GLASS
GLASS MUST NOT BE PLACED ON TOP OF OR NEXT TO BURNER. GLASS TO BE PLACED ONLY TO THE OUTSIDE OF THE FLANGED OPENING.

Figure **50**

2. To install the Decorative Glass, cut off a corner of the plastic bag to apply the glass to the top shelf on the Loft burner cover. See Figure 50. Apply only enough glass to cover the black metal surfaces. Do not allow the glass to fall around the burner tube. See Figure 51. Apply the remaining decorative glass to the front sloped surfaces of the Top Cover. Start by placing the glass along the front edges of the top cover, then gradually add the glass up the sloped areas until completely covered. Do not allow the glass to fall around the burner tube. See Figure 52.

CAUTION: Glass must not be placed on the burner.

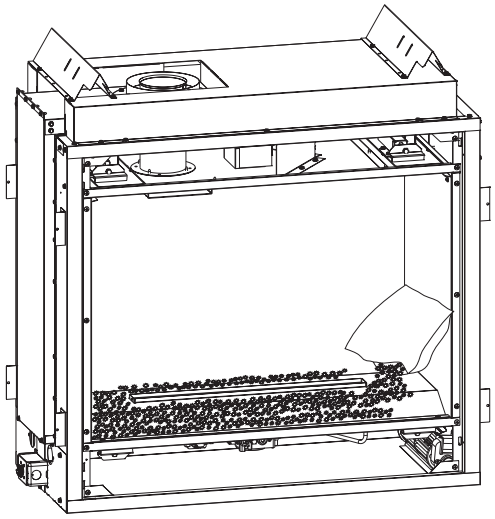


Figure **51**

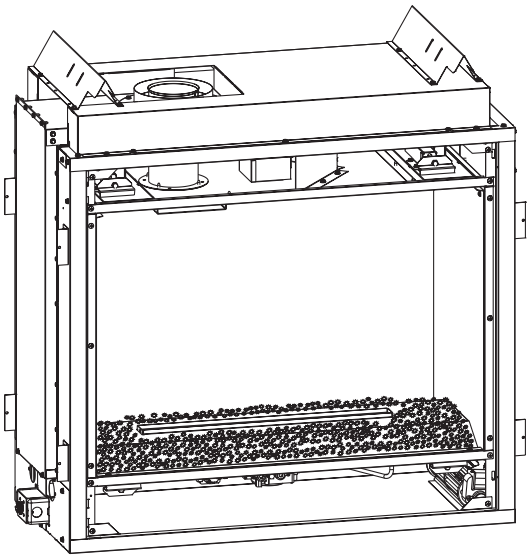
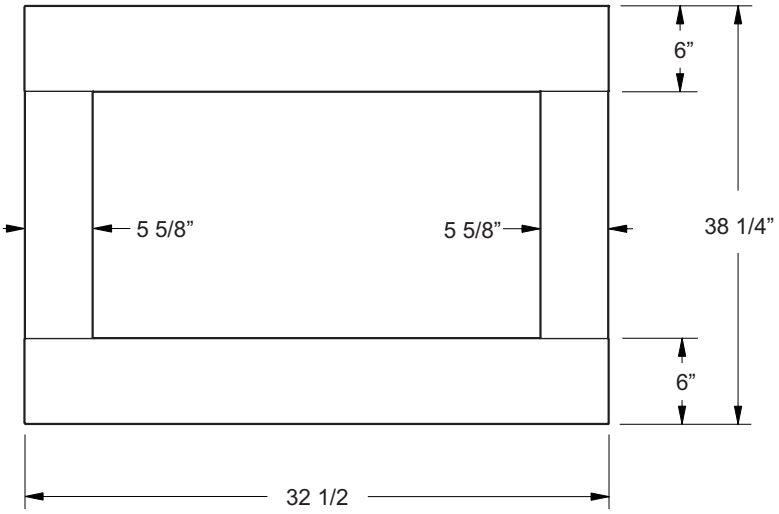


Figure **52**

SURROUND OPTIONS

The following accessory parts can be obtained from your Empire Comfort Systems dealer. If you need additional information beyond what your dealer can furnish, contact Empire Comfort Systems Inc., Nine Eighteen Freeburg Ave., Belleville, Illinois 62220.

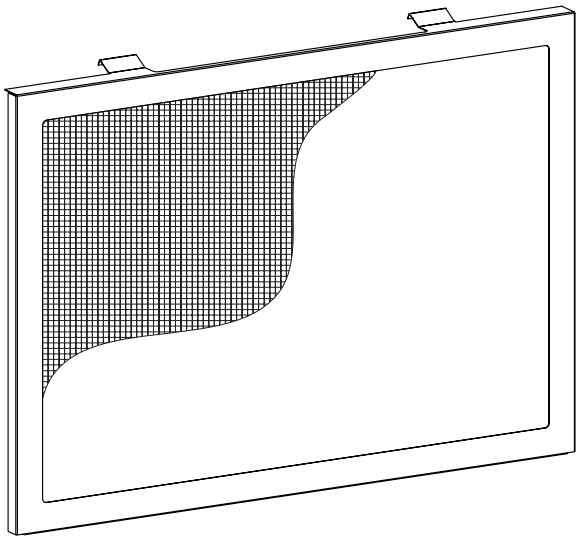


Standard Contemporary Surround

- Black - DF36M4BL
- Black & Stainless - DF36M4BLSS

Note: One standard contemporary surround required for each side of the DLCX36SP fireplace.

ACCESSORIES



DVFS36SXBL Firescreen (Optional)

OPTIONAL DECORATIVE GLASS ACCESSORIES

Accessory Model Number	Description
DG30BUC	Decorative Glass - Blue Clear
DG30BKP	Decorative Glass - Black Polished
DG30CLF	Decorative Glass - Clear Frosted

MASTER PARTS DISTRIBUTOR LIST

To Order Parts Under Warranty, please contact your local Empire dealer. See the dealer locator at www.empirecomfort.com. To provide warranty service, your dealer will need your name and address, purchase date and serial number, and the nature of the problem with the unit.

To Order Parts After the Warranty Period, please contact your dealer or one of the Master Parts Distributors listed below. This list changes from time to time. For the current list, please click on the Master Parts button at www.empirecomfort.com.

Please note: Master Parts Distributors are independent businesses that stock the most commonly ordered Original Equipment repair parts for Heaters, Grills, and Fireplaces manufactured by Empire Comfort Systems Inc.

Dey Distributing
1401 Willow Lake Boulevard
Vadnais Heights, MN 55101

Phone: 651-490-9191
Toll Free: 800-397-1339
Website: www.deydistributing.com
Parts: Heater & Hearth

East Coast Energy Products
10 East Route 36
West Long Branch, NJ 07764

Phone: 732-870-8809
Toll Free: 800-755-8809
Fax: 732-870-8811
Website: www.eastcoastenergy.com
Parts: Heater & Hearth and Grills

Victor Division of F. W. Webb Company
200 Locust Street
Hartford, CT 06114

Phone: 860-722-2433
Toll Free: 800-243-9360
Fax: 860-293-0479
Toll Free Fax: 800-274-2004
Websites: www.fwwebb.com & www.victormfg.com
Parts: Heater & Hearth and Grills

HOW TO ORDER REPAIR PARTS

Parts Not Under Warranty

Parts can be ordered through your Service Person, Dealer, or a Master Parts Distributor. See this page for the Master Parts Distributors list. For best results, the **service person or dealer** should order parts through the distributor. Parts can be shipped directly to the **service person/dealer**.

Warranty Parts

Warranty parts will need a proof of purchase and can be ordered by your Service Person or Dealer. Proof of purchase is **required** for warranty parts.

All parts listed in the Parts List have a Part Number. When ordering parts, first obtain the Model Number and Serial Number from the name plate on your equipment. Then determine the Part Number (**not** the Index Number) and the Description of each part from the following illustration and part list. Be sure to give all this information . . .

Appliance Model Number _____ Part Description _____

Appliance Serial Number _____ Part Number _____

Type of Gas (Propane or Natural) _____

Do not order bolts, screws, washers or nuts. They are standard hardware items and can be purchased at any local hardware store.

Shipments contingent upon strikes, fires and all causes beyond our control.

APPLIANCE SERVICE HISTORY

Date	Dealer Name	Service Technician Name	Service Performed/Notes

APPLIANCE SERVICE HISTORY

Date	Dealer Name	Service Technician Name	Service Performed/Notes

Empire Comfort Systems Inc.
918 Freeburg Ave. Belleville, IL 62220

If you have a general question about our products, please e-mail us at info@empirecomfort.com.
If you have a service or repair question, please contact your dealer.

www.empirecomfort.com